AF50315 Corymbac AX120849 Sequence AX064991 Sequence AX064995 Sequence AX132662 Streptomy AF262949 Mycobacte

AX064995 SCF11

AE007125 MTU00024

MSGY2

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17992 43523 31175 31176

AB083299 AX064993

AF503915

AR123974 Sequence AF038548 Corynebac Y09548 Corynebacte

AX453601 AX453603 AR123974 AF038548 CGPYC

AX453601 Sequence AX453603 Sequence

SUMMARIES

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Length

Corynebac

AX127145 Sequence A97276 Sequence 1

AX064991 Sequence AX064985 Sequence AX064987 Sequence AF097728 Appergill AF509529 Gallus ga U04611 Human pyruv BC011617 Homo sapi U30891 Human pyruv

AX064989 AX064991 AX064985 AX064987 AX064987 AF509529 HSU304641 BC011617 HSU30891

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L09192 Mus musculu U36585 Rattus norv AX401890 Sequence

U32314 Rattus norv

RNU32314 AX410383

4058 4058 4067 4024 3945 4017

AX410383 Sequence

S72370 pyruvate ca AJ009972 Aspergill AF132152 Drosophil AL023635 Mycobacte AL583923 Mycobacte L78825 Mycobacteri U51439 Rhizobium e

Z83018 Mycobacteri U00024 Mycobacteri AD000009 Mycobacte AX064989 Sequence

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Hanke, P.D.
Feedback-resistant pyruvate carboxylase gene from corynebacterium
score greater than or equal to the score of the result being printed, and is derived by analysis of the total score distribution.
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Corynebacterium glutamicum
Bacteria, Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Corynebacteriaceae;
Corynebacterium.
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MSGB1723CS

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AF295372 AE009469

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Oy 2701 GGCGACCTCGCACTCCACCTGGTTGGTGCGG Db 2701 GGCGACCTCGCACTCCACCTGGTTGGTGCGG Oy 2761 CCACAAAAGTACGACATCCCAGACTGTTGTTGATGCGG Oy 2761 CCACAAAAGTACGACATCCCAGACTGTTGATCACACATCCCAGACTGTTGATCACAAAGTTACGAAAAGTTACGAAAAGTACAAAAAGTACAAAAAGTACAAAAAAAA	2821	OY 2881 AAGCACTCTGACGAAGTTCTTGAGGAAG.		Db 3001 GAGCACCGTCGCCCTTCGGCAACACCTCTG Qy 3061 CTGGTCGAGGGCCGCGAGACTTTGATCCGCC Db 3061 CTGGTCGAGGGCCGCGAGACTTTGATCCGCC	Oy 3121 CGCCTGGATGCGATCTCTGAGCCAGACGATA 	3181	3241	3301	3361	Db 3421 GTTCCTGCAACGAAGGTGGAAGGTGGCG		ACCESSION AX453603.1 GI:21712843 KEYWORDS	SOURCE COTYMBACCETUM GLUEARICUM. ORGANISM COTYMBACCETUM Glutamicum Bacteria, Firmicutes, Actinob Actinomycetales, Corynebacter Corynebacterium	REFERENCE 1 AUTHORS Hanke, P.D. TITLE Feedback-resistant pyruvate c. JOURNAL Patent: WO 0231158-A 3 18-APR	ARCHER-DANIELS-MIDLAND COMPAN FEATURES Location/Qualifiers source 13474
1561 AAGGATCTGCCACGCGGGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGCGGG 1620 1621 TTTGCTCGTGATCTCCGTGAGCACGCACTGGCAGTTACTGATACCACCTTCCGCGAT 1680 1621 TTTGCTCGTGATCTCCGTGAGCAGCACGCGAGTTACTGATACCTTCCGCGAT 1680 1621 TTTGCTCGTGATCTCCGTGAGCAGCGACCGGCGTTACTGATACCACTTCCGCGAT 1680 1681 GCACCAGCCTTTCGCTTCGCTCGACCGACCGGACCTGAGCCTGCAGCCTGCGGCAGAGTTACTTTCGCACTGAGCCTGCGCACACGAGAGTTACTTTTTTTT	1681 GCACACCAGTCTTTGCTT 1741 GCCGTCGCAAAGCTGACT	1801 GATGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGGGACAGGCTCGACGAGGTGCGCGA 186	1861 (1861 (1921 (1921 CCGTACCCAGACTCCGTCTGCCGCGGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGACTGGCCAGCTTGGCAGCTGCCAGCTTCCGGCGTGACCTGCCAGCTGCCAGCTGCCAGCATCGCAGCATCCGACGATGCGTCCCAGCATCCAGCATCCACGAATCGACGAATCGACGAATCGACGAATCAACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCAACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCGACGAATCAACAATCAACAATCAACAATCAACAATCAACAATCAACAA	1981 2041 2041	2101 GATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTC	2161 AAGTCTGGCGCTCACATTCTGGCCATTAAGGATATGGCTGGTCTGCCTTCGCCCAGCTGCG 2220	2221 GTAACCAAGCTGGTCACCGCACTGCGCCGTGAATTCGATCTGCCAGTGCACGTGCACACC 2280	2281 CACGACACTGCGGGCCAGTTGGCTACCTACTTTGCTGCAGCTCAAGCTGGTGCAGAT 2340	2341 GCTGTTGACGGTGCTTCGCACCACTGTCTGGCACCACCTCCCAGCCATCCCTGTCTGCC 2400	2401 ATTGTTGCTGCATTCGCGCACACCGTCGCGATACCGGTTTGAGCCTCCAGGCTGTTTCT 2460	2461 GACCTCGAGCCGTACTGGGAAGCTGTGCGGACTGTACCTGCCATTTGAGTCTGGAACC 2520	2521 CCAGGCCCAACCGGTCGGTCTACCGCCACGAAATCCCAGGCGGACAGTTGTCCAACCTG 2580	2581 C 2581 C	2641 GCAGCCGTTAATGAGATGCTGGGACGCCCAACCAAGGTCACCCCATCCTCCAAGGTTGTT 2700
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linear PAT 16-MAY-2001 ö FITGAGTCTGTCACCGCAACC 3240 CACCATTCGCTGGTGTTGTC 3300 ATGCAGTCGCAATCATCGAG 3360 GGCAAGATTGAACGCGTTGTG 3420 GCAATGTTGTGGCCAACGTC 3180 TAATTACTCTAGTGTCGACT 60 TAGCAAACCGCGGCGAAATC 120 ||||||||||||||||||| TAGCAAACCGCGGCGAAATC 267 CCACGGTAGCTATTTACCCC 180 AAGCTGTCCGCATTGGTACT 240 TTATCGGTGCAGCTAAAAAA 300 ||||||||||||||||||||| TTATCGGTGCAGCTAAAAA 447 CCCCAGAGGTTCTTGATCTC 420 0; Gaps TCGTCGTTTCCTAA 3474 |||||||||||||||| |CGTCGTTTCCTAA 3474 B 6; Length 3621; L.B. ium glutamicum 47; Indels

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SDPNBEGLYLDYYLKONAEBIWGSGAITLAIKOMAGILIRPANTKLYTALRREREDEPU
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Direct Submission
Submitted (14-DEC-1997) Chemical Engineering, Massachusetts
Instute of Technology, 77 Massachusetts Avenue, Cambridge, 02139, USA
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Kroffas.M.A., Ramamoorthi,R., Pine,W.A., Sinskey,A.J. and
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Corynebacterium glutamicum
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae; Actinomycetales; Corynebacterineae;
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8 8	301	GTTAAAGCAGATGCTATTTACCCGGGATATGGCTTCCTGTCTGAAAATGCCCAGCTTGCC 360 CHIN	q	152
3 8		,	δ	144
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3 8	, ,	, ,	λŏ	150
5 6	124	######################################	qu	164
ì) 7	1 2	δ	156
g 5	481	GAATCCACCGGAAGAAAAAAAAAAAAAGAAAAAAGGGAAAAAAA	qu	170
ò	541	CCCATCITIGIAAAGGGAGTIGCCGGTGGCGGGACGCGGTATGCTTTGTTTCTTCA 600	۸۵ م	162
a D	688	74	λõ	168
§ 5	601	CCTGATGAGCTCCGCAAATTGGGAACAACAATCTCGTGAAGCTGAAGCATTCGGC 660 CTGATGAGCTTCGGCAAATTGGAAACAACAACAACAACAACAACAACAACAAGCGGCAATTCGGC 660 CTGATGAGCTTTCGAAATTAACAAAAAAAAAAAAAAAAA	qq	182
3 8	0 .	ס מ	ζō	174
8 8	808	GATGGTTGGTATATICTGAACGTGTGTGATTAACCCCCAACATTGAAGTGCAAGTTGTGTGTG	qa	188
è	10.1	-	ò	180
<u> </u>	868		qa	194
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ì			δ	204
<u> </u>	1108	CAGGILIGANCACACACACACACACACACACACACACACACACACAC	qu	218
È	1001		ζ	210
<u>В</u>	1168		qa	224
;			λŏ	216
<u> </u>	1228	CACCOLGENIC GCACOCCAT LANCACCONATA CANACANACANACANACANACANACANACANACANACA	qq	230
3 8	7		ò	222
<u></u>	1288	CANTACLGGAMALIATCACCGGATACCGGTTCACCAGGGCGGGGCGTTCGGTTTGGGGGTTGGGGGTTGGGGGTTGGGGGTTGGGGGG	QΩ	236
3 8	1001	5 5	δ	228
<u> </u>	1348		qa	242
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ò	1321	13	λ _ο	240

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1561 AAGGATCTGCCACTGCCACGCGGTTCCCGTGAC 1708 AAGGATCTGCCACTGCCACGCGGTTCCCGTGAC 1708 AAGGATCTGCCACTGCCACGCGGTTCCCGTGAC 1708 ATTGCTCGTGACCTGCACGCGGGTTCCCGTGACCTGG 1818 GCACCACGTCTTTGCTTGCTTGCGACCCGACTCCCCGTGACCTTGCTTG
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1621 TTTGCTCGTGATCTCCGTGAGCAGGACGCACT 1681 TTTGCTCGTCATCTCCGTGAGCAGGACGCACT 1768 TTTGCTCGTCATCTCCCGTGAGCAGGACGCACT 1681 GCACACCAGTCTTTGCTTGCGACCCGAGTCCG 1828 GCACACCAGTCTTTTGCTTGCGACCCGAGTCCG 1918 GCCTCGCAAAGCTCACTTTGCAGCTTTTGTCT 1948 GCCTCGCAAAGCTCACTCTTTTTGAGGATCC 1948 GCGTTGCCGATGCGTTTTCTTTTTGAGGATCC 1948 GCGTTGCCGATGCGTTTCTCTTTTTGAGGATCC 1951 GCGTTGCCGATGCGTTTCTCTTTTTGAGGATCC 1951 ATCTTCCGCATGCGTTTGCCGCGCGCTTTTTTTTTTTTT
1768
1681 GCACCCAGTCTTTGCTTGCACCCGAGTCCG 1828 GCACCCAGTCTTTGCTTGCGCACCCGAGTCCG 1711 GCCGTCGCAAAGCTGACTCCTGAGCTTTTGTC 1888 GCCGTCGCAAAGCTGACTCCTTGAGGATCC 1901 GATGTGGCATTGCTTCCTTTGAGGATCC 1914 GATGTGGCATTGCTTTCCTTTGAGGATCC 1915 GATGTGGCAATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAGATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAGATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAGATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAGATGTAAACATTCAGATGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCTGCT
1928 GCACACCAGTCTTTGCTTGCGACCCGAGTCCG 1741 GCCGTCGCAAAGCTCACTTGACTTTTGTC 1888 GCCGTCGCAAAGCTCACTCTGAGCTTTTGTC 1801 GATGTGGCGATGCGTTTCCTCTTTGAGGATCC 1801 GATGTGGCGATGCGTTTCCTCTTTGAGGATCC 181 GCGATGCCGAATGCGTTTCCTCTTTGAGGATCC 1820 GCGATGCCGAATGCTAAACATTCAGATGCTGCT 1921 CCGTACCCAAATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAAATGTAAACATTCAGATGCTGCT 1921 CCGTACCCAAATGTCAACCTTCAGATGCTGCT 1931 ATCTTCCGAATCTCTCGCCGCGCGTTACTGCT 2041 GTCCTCGAACTCCGTCTGCCGCGCTTACGACGT 1948 ATCTTCCGCATCTTCGACGCGCTTAACGACGT 2041 GTCCTCGAAATCAAACACCGCGGGTAACGAGGT 2041 GTCCTCGAAATCAAAAAGCTCTACACCCTGGATTA 2188 GTCCTGAAACAAAAAAAACTCTACACCTTGACCGAGGT 2161 AAGTCTGGCGCTCACACTCTGCCCTTAAAGGA 2161 AAGTCTGGCGCTCACATTGACCATTAAGGA 2161 AAGTCTGGCGCTCACATTGACCATTAAAGA 2161 AAGTCTGGCGCTCACATTGGCCATTAAGGA 2161 AAGTCTGGCGCTCACATTGGCCATTAAGGA 2161 AAGTCTGGCGCTCACATTGGCCATTAAGGA 221 GTAACCAAGCTGGTCACCTTGGCCGTGA 221 GTAACCAAGCTGGTCACCTTGGCCGTGA 221 GTAACCAAGCTGGTCACCTTGGCCGTGA 221 GTAACCAAGCTGGTCACCCTTGGCCTTAACCTA
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1861 GCGATGCCG 2008 GCGATGCCCA 1921 CCGTACCCA 2068 CCGTACCCA 2068 CCGTACCCA 2041 GTCTCGGA 2041 GTCTGGAG 2101 GATCTGGAG 2101 AAGTCTGGC 2308 AGGTCTGGC 2308 AGGTCTGGC 2308 GTAACCAAG 221 GTAACCAAG
2008 GCGATGCCG 1921 CCGTACCCA 2068 CCGTACCCA 1981 ATCTTCCGC 2128 ATCTTCCGC 2041 GTCTTCGGAG 2041 GTCTTCGGAG 2101 GATCCTAGAG 221 GATCCTAGAG 2210 AAGTCTGGC 2308 AAGTCTGGC 23108 AAGTCTGGC 221 GTACCAAG 221
1921 CCGTACCCA 2068 CCGTACCCA 1981 ATCTTCCGC 2041 GTCTCGGAG 2128 ATCTTCCGAA 2101 GATCCAAAT 2101 GATCCAAAT 2101 GATCCAAAT 2248 GATCCAAAT 2308 AGTCTGGG 2321 GTAACCAAA 2221 GTAACCAAA
2068 CCGTACCCA 1981 ATCTTCCGC 2128 ATCTTCCGG 2041 GTCCTGGAG 2041 GTCCTGGAG 2101 GATCCTGAAT 2248 GATCCGAAT 2161 AAGTCTGGC 2308 AAGTCTGGC 23108 AAGTCTGGC 221 GTAACCAAG
1981 ATCTTCCGC 2128 AICTTCCGAG 2041 GTCCTGGAG 2041 GTCCTGGAG 2101 GATCCAAAT 2248 GATCCAAAT 2161 AAGTCTGGC 2308 AAGTCTGGC 2308 AGTCTGGC 2211 GTAACCAAG 2211 GTAACCAAG 2211 GTAACCAAG 2211 GTAACCAAG 2211 GTAACCAAG
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2248 GAICCAANT 2161 AAGTCTGGC 2308 AAGTCTGGC 2221 GTAACCAAG 2286 GTAACCAAG
2161 AAGTCTGGC 2308 AAGTCTGGC 2221 GTAACCAAG 221 GTAACCAAG 2368 GTAACCAAG
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2221 GTAACCAAG
2368 GTAACCAAG
2281 CACGACACT
2428 CACGACACTGCGGGTGGCCAGCTG
QY 2341 GCTGTTGACGCTGCTTCCGCACCACCACCACCACCACCCAGCCATCCCTGTCTGCC
2488 GCTGTTGACGGTGCTTCCGCACCA
OY 2401 ATIGTIGCTGCATTCGCGCACACCCGTCGCGATACTGTTGAGCCTCGAGGCTGTTTCT

BCT 08-MAY-1998

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Vog548.1 GI:2879822

Spyc gene; pyruvate carboxylase.
Corynebacterium glutamicum.
ISM Bacteria; Actinobacteria; Actinobacterium.
Corynebacterineae; Corynebacteriaceae; Actinomycetales;
Corynebacterineae; Corynebacteriaceae; Corynebacterium.
Corynebacterium.

Corynebacterium.

Corynebacterium.

Corynebacterium.

Thases 1 to 3728)

RS Peters-Wendisch, P. G., Kreutzer, C., Kalinowski, J., Patek, M., Sahm, H.
Pyruvate carboxylase from Corynebacterium glutamicum:
characterization, expression and inactivation of the pyc gene
Microbiology 144 (Pt 4), 915-927 (1998)
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/product="1012" carboxylase"
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/db_xref="1012" carb
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Peters-Wendisch,P.G.
Direct Submission
Submitted (21-NOV-1996) P.G. Peters-Wendisch, Institut fuer
Biotechnologie 1, Forschungszentrum Juelich GmbH, Juelich, D-52425,
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larity 98.6%; Pred. No. 0;
Conservative 0; Mismatches 47;
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/organism="Corynebacterium gl/strain="ATC 13032"
/db_xref="taxon:1718"
                       Corynebacterium glutamicum pyc gene.
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g &	2334 GTAACCAAGGTCACCGCACTGCGCCGTGAATTCGATCTGCCAGTGCACGTGCACACC 2393 2281 CACGACACTGCGGGTGGCCAGTTGCTACTTTGCTGCAGGTCAAGGTGCAGAT 2340	Oy 3361 GCTATGAAGATGGAAGCAACAATCAC
	CACGACACTGCGGGTGGCTGGCAACCTACTTTGCTGCAGCTCAAGCTGGTGCAGAT	3421
	2341 GCTGTTGACGGTGCTTCCGGACCACTGTGGGACCACCCCCACCCTGTCTGCC 2400 2454 GCTGTTGACGGTGCTTCCGCACCACTGTCTGGCACCACCCATCCCTGTCTGCC 2513	
	2401 ATTGTTGCTGCATTCGCGCACACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCT 2460 1	
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	2521 CCAGGCCCAACCGGFCGCGTCTACCGCCACGAATCCCAGGCGGACAGTTGTCCAACCTG 2580 	SOURCE unidentified. ORGANISM unidentified. unclassified. REFERENCE 1 (bases 1 to 3728)
	2581 CGTGCACACCGCACTGGGCCTTGCTGATCGCTTCGAGCTCATCGAAGACAACTAC 2640 	AUTHORS PETERE-WENDISCH,P. and E TITLE METHOD FOR MICROBIAL PRO AND/OR GLUTAMATE FAMILY JOURNAL PATENT: WO 9918228-A 1 1
	2641 GCAGCCGTTAANGAGANGCTGGGACGCCCAACGAGGTACCCCCATCCTCCAAGGTTGTT 2700 	PETERS WENDISCH PETRA (D FEATURES Location/Qualif Source 1 .3728 /organism="unid
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	2881 AAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCAGGCGCACCTCGACGCTGATGATTCC 2940 1	174
	2941 AAGGAACGTCGCAACACCCCTCAACCGCCTGCTGTTCCCGAAGCCAACCGAAGAGTTCCTC 3000 	121
	3001 GAGCACCGTCGCCGCTTCGGCAACACCTCTGCGCTGGATCGTGAATTCTTCTACGGA 3060 	181
	3061 CTGGTCGAGGGCCGCGAGACTTTGATCCGCCTGCCAGATGTGCGCACCCCACTGCTTGTT 3120 	354
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දු පු	OY 661 GACGGTICGGTATATGTCGAACGTGCTGTGATTAACCCCCAGCACATTGAAGTGCAGAT 	TTGAAGTGCAGATC 720 TTGAAGTGCAGATC 833
9 9	OY 721 CTTGGCGATCGCACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCACTG D 834 CTTGGCGATCACACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCACTG	CTCACTGCAGCGT 780
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දු දු	OY 841 CGCATTIGIGGGGAIGCAGTAAGTICTGCCGCTCCATTGGTTACCAGGCGCGGGGAACC	AGGGGGGGGAACC 900
දු පු	QY 901 GTGGAATTCTTGGTCGATGAAAGGGCAACCACGTTTTCATCGAAATGAACCACGTAT 	GAACCCACGTATC 960
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8 6	Qy 1141 CATACCGGAACTATCACCGCGTCACCGCTCACCGGAGCTGGCGTTCGTCTTGACGGT Db 1254 CATACCGGAACTATCACCGCTACCGCTCACCAGGCGGAGCTGGCGTTCGTCTTGACGGT	TTCGTCTTGACGGT 1200 TCGTCTTGACGGT 1313
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g & g	1494 TICACTICCAMGCGCATCGCCACCGGATTCATTGCCGATCACCGCACCTGCACTTGCCGATTGCTGCAGATTGTTGCCAGATTGTTGCTGCATTGTTGTTGTTGTTGTTGTTGTTGTTGTTGTTTGT	ACCIOCITICAGGCI 1555 ATGGTCACCGGGAAC 1500 ATGGTCACCGGAAC 1613
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දු පු	OY 1561 AAGATCTGCCACTGCCACTGCGTTCCCGTGACGCCTGAACAGCTTGGCCCAGCGGC Db 1674 AAGATCTGCCACTGCCACGCGGTTCCCGTGACGCCTGAAACAGCTTGGCCCAGCGGC	TTGGCCCAGCCGC 1620
ò	1621	CCACCTTCCGCGAT 1680

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δ	1681	CACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAG 174
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ð :	74	ACTCCTGAGCTTTTGTCCGTGGAGGCCTGGGGCGGGCGCGACCTAC 180
q G		CGTCGCAAAGCTGACTCCTGAGCTTTTGTCCGTGGAGGCCTGGGGGCGGCGCGCGACCTAC 191
& 8	1801	GATGTGGCGATGCGTTTCCTCTTTGAGATCCGTGGAAAGGCTCGACGAGCTGGCGGGGGGG 1860
à		SATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGGTGGGATACACC 192
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This sequence is conducted by collaboration
Co. Ltd. And Kitasato University.
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Corynebacterium glutamicum ATCC 13032 DNA, complete genome, section
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2 (baseal to 332050)
Nakagawa,S.
Direct Submission
Submitted (24-MAY-2002) Satoshi Nakagawa, Kyowa Hakko Kogyo Co. Litd., Tokyo Research Laboratories; 3-6-6, Asahi-machi, Machida, Tokyo 194-8533, Japan (E-mail:snakagawa@xanagen.com,
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721 CTTGGCGATCGCACTGGAGAAGTTGTACA	SATIAACCCICAGCAIATTGAAGTGCAGGTC 3/929	8	1801
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1141 GATACCGGAACTATCACCGCGTACCGCTC	GATACCGGAACTATGACGGCGTACCGGTCACCAGGGGGAGCTGGGGGTTCGTCGTGACGGGT 1200 	qa —	39430
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38710 AAGCCTCATGGTGTGCGTCCAAAGGATGT		<u>a</u> 2	39790
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M Corynebacterium glutamicum.

Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae;
Corynebacterium.

Corynebacterium.

1 (bases 1 to 34980)

Nakagawa,S., Mizoguchi,H., Ando,S., Hayashi,M., Ochiai,K., Yookoi,H., Tateishi,M., Senoh,A., Ikeda,M. and Ozaki,A.

Novel pulvmuclachidas
Patent: EP 1108790-A 7061 20-JUN-2001;

KYOWA HAKKO KOGYO CO., LTD. (JP)

Incation/Qualifiers

1. 1349980
                                                                                            CCACAAAAGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGCGGCGAGCGTTGGTAAC
                                                                       CCTCCAGGTGGCTGGCCACAGGCCACTGCGCACCCGCGCACTGGAAGGCCGCTCCGAAGGC
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Sequence 7061 from Patent EF1108790.
AX127145 AX114121
AX127145.1 GI:14041133
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AX127145
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DEFINITION
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                                                                                                          Query Match

97.8%; Score 3398.8; DB 6; Length 349980;

Best Local Similarity 98.6%; Pred. No. 0;

Matches 3427; Conservative 0; Mismatches 47; Indels 0; G
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/db xref="taxon:1718"
/nofe="Seq 1 to long (3.309.400) split in 11,
0.600.001 0.949.980 '"
90638 c 98727 g 81341 t
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Db 106060 GTGGAATTCTTGGTCGAT Qy 961 CAGGTTGAGCACACCGTG TH	1021	Oy 1081 CACGGTGCAGCACTGCAG 	OY 1141 GATACCGGAACTATCACC DP 106300 GATACCGGAACTATCACC	Oy 1201 GCAGCTCAGCTCGGTGGC 	Oy 1261 TGCCGTGGTTCCGACTTTD	Oy 1321 ACCGTGTCTGGTGTTGCA D 106480 ACCGTGTCTGGTGTTGCA	Oy 1381 TTCACTTCCAAGGGCATC D 106540 TTCACTTCCAAGGGCATC	Oy 1441 CCACCTGCGGATGATGAG 	Oy 1501 AAGCCTCATGGTGTGCT 	Oy 1561 AAGATCTGCCACTGCCA D 106720 AAGATCTGCCACTGCCA	Qy 1621 TTTGCTCGTGATCTCCGT 	Qy 1681 GCACACCAGTCTTTGCTT 	Oy 1741 GCCGTCGCAAAGCTGACT 	QY 1801 GATGTGGCGATGCGTTTC D 106960 GATGTGGCGATGCGTTTC	Qy 1861 GCGATGCCGATGTAAAC, 	Oy 1921 CCGTACCCAGACTCCGTC Db 107080 CCGTACCCAGACTCCGTC	OY 1981 ATCTTCCGCATCTTCGAC Db 107140 ATCTTCCGCATCTTCGAC

	2101 GATCCTGG 2101 GATCCTGG 2101 GATCCAP 2221 GATCCAP 2231 GATCTGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGGG	CTGGAGACCAACACCGGGGTGGCTATGGCTTATTCTGGTGATCTCTCT 2100 CTGGAGACCAACACCGGGGTGATGGCTATATTCTGGTGATCTCTCT 2100 CTGGAGACCAACACCGGGGTGGCTATGGCTTATTCTGGTGATCTCTCT 107259 CCAAATGAAAAGCTCTCACCTGGATTACTACGATGGCAGAGAGAG	2280 10743 2340 10749 2400 10755	recartececendencegreecarrectroscerectro	C 107 F 270 F 107 C 276 C 282	CCGGAACCACTGCGCACCCGGCACTGGAAGGCCGCTCCGGAAGGC
	2041 07200 2101 07260 2101 07320 07320 07320 07320 07320 07380 07380 07440 07560 07760 077	TCCTGGAGA TCCTGGAGA TCCTGGAGA AATCCAAATC AAGTCTGGCC AAGTCTGGCC	TAACCAAGG TAACCAAGGG TAACCACCCAAGGGGGGGGGG	MITGITGCTC MITGITGCTC MACCTCGAGC MACCTCGAGCAGC MACCTCGAGCAGCAGC MACCTCGAGCAGCAGC MACCTCGAGCAGCAGC MACCTCGAGCAGCAGCAGC MACCTCGAGCAGCAGCAGC MACCTCGAGCAGCAGCAGCAGC MACCTCGAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAGCAG	COCCACACCOTTP SCAGCCOTTP SCAGCCOTTP SCAGCCOTTP COCCACACCTCC CCCCACACCTCC CCCCCACACCTCCCCCCCC	CCTCCAGGTGGCTGG CCTCCCAGGTGGCTGG AAGGCACCTCTGACG AAGGCACCTCTGACG AAGGAACGTCGCAAC AAGGAACGTCGCAAC AAGGAACGTCGCAAC AAGGAACGTCGCCGC CTGGTCGAGGCCGCCCCCCCCCC

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KLTPELLSVEAMGGATYDVANRFLFEDPWDRLDELREAMPNVNIQMLLRGRNTVGYTP
YDSSVCRAFYKEAATSGYDJFRIFOPLINDSQMRPRIDAVLEYTHTAVAEVAMAXSGDL
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LDLPRYTPELLHRRPGRSTSALGRSEGKAAPLTEVPBEEQHLDADDSKGRRNSLNS
LDLFRYTPELLHRRPGRSTSALGNSSUS
LDLFRYTPELLHRRPGRSTSALGNSTSALGRSTSTSKRGGGDLIVVIS"

1041 c 1006 g 809 t
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Location/Qualifiers

1. 3657
/ organism="Corynebacterium crenatum"
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3657 bp DNA linear BCT 13-MAY-2002 Corynebacterium crenatum strain CD945 pyruvate carboxylase (pyc) Gene, complete cds.
AF503915
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Db 108520 GCTATGAAGATGGAAGCAATCACTGCTTCTGTTGACGGCAAAATCGATGTGTG 108579
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1 (bases 1 to 3657)
Wang, J., Ding, J. and Liu, Y.
Cloning and Expression of Pyruvate Carboxylase Gene in
Corynebacterium crenatum CD945
Unpublished
Unpublished
To 3657)
Wang, J., Ding, J. and Liu, Y.
Direct Submission
Submitted (18-APR-2002) Center of Microbial Biotechnology,
Institute of Microbiology, Chinese Academy of Sciences, Beijing
100080, China.
                                                                                                                                                                  3300
                                                                                         3240
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             GITCCTGCTGCAACGAAGGTGGAAGGTGGCGACTTGATCGTCGTCGTTTCCTAA 3474
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Corynebacterium crenatum.
Bacteria; Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Corynebacteriaceae;
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AF503915
LOCUS
DEFINITION
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KEYWORDS
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Qy 841 GGCATTTGTGCGGATGCAGTAAAGTTCTGCCGCTCCATTGGTTACCAGGCGCGGGAACC 900 b 940 CGCATTTGTGCGGATGCAGTAAAGTTCTGCCGCTCCATTGGTTACCAGGGCGCGGGAACC 999 Qy 901 GTGGAATTCTTGGTCGATGAAAAGGCCAACCACGTTTTCATCGAAATGAAACCCACGTATC 960 b 1000 GTGGAATTCTTGGTCGATGAAAAAGGCCAACCACGTTTCATCGAAATGAACCACGTATC 1059 Qy 961 CAGGTTGAACAACCACCGAGGTGGACCTGGTGAAAGGCCAAATG 1050 Dh 1060 CAGTTGAACAACAACCACAAAAAGAAAAAAAAAAAAAAA	1021 CGCTTGGCTGCTGGTGCAACCTTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCTTGACCCAAGATAAGATCAAGACCTTGACCCAAGATAAGATCAAGACCTTGACCCAAGATCAAGACCTTGACCCAAGATCAAGACCCAAGATCAAGACCCAAGATCAAGACCCAAGATCAAGACCCAAACAACAAGACCCCAAACAACAACAACAACA	GATACCGGAACTATCACCGCGTACCGCTCACCAGGCGGAGCTGGGGTTCGTCTTGACGGT GATACCGGAACTATCACCGCGTACCGCTCACCAGGCGGAGCTGGGGTTCGTCTTGACGGT GCAGCTCAGCT			1561 1660 1621 1720	rgcggcagag rgcggcagag gggacctac	QY 1801 GATGTGGCGATGCCTTTCTTTTGAGGATCCGTGGGACAGGCTCGACGAGGGGGGGG

CCACGGTGCAGCACTGCAGTGCCGCATCACCACGGAAGATCCAAACAGGC 1131 1140 1191 TGCAGCTCAGCTCGCTGCCGAAATCACCGCACACTTTGACTCCATGCTCGTG 1251 CCAGGTTGAGCACACCGTGACTGAAGAAGTCACCGAGGTGGACCTGGTGAAG 1011 GCGCTTGGCTGCTGCTGCAACCTTGAAGGAATTGGGTCTGACCCCAAGATAAG 1071 780 951 420 531 480 540 600 9 720 840 240 351 300 411 360 471 591 651 711 771 831 891 CACCGGTGATAAGTCTCGTGCGGTAACCGCCGCGAAGAAGGCTGGTCTGCCA CACCGGTGATAAGTCTCGCGGGTAACCGCCGCGAAGAAGGCTGGTCTGCCA GGAATCCACCCCGAGCAAAAAATCGATGACATCGTTAAAAGCGCTGAAGGC GGAATCCACCCCGAGCAAAAACATCGATGAGATCGTTAAAAGCGCTGAAGGC CCTTGGCGATCGCACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCA CCTTGGCGATCACACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCA TCGCATTTGTGCGGATGCAGTAAAGTTCTGCCGCTCCATTGGTTACCAGGGC CGTGGAATTCTTGGTCGATGAAAAGGGCAACCACGTTTTCATCGAAATGAAC

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2640 2760 2880 2940 2631 2580 2691 2751 2700 2811 2871 2820 2991 3051 3000 3111 3060 2571 2931 3171 3120 3231 3180 3240 3300 3411 3291 3351 2401 GCTGTTTCTGACCTCGAGCCGTACTGGGAAGCAGTGCGCGGACTGTACCTGCCATTTGAG TCTGGAACCCCAGGCCCAACCGGTCGCGTCTACCGCCACGAAATCCCAGGCGGACAGTTG 2941 GAGTTCCTCGAGCACCGTCGCCGCTTCGGCAACACCTCTGCGCTGGATGATCGTGAATTC ATCATCGGGGGGTATGGAGGAACAATCACTGCTTCTGTTGACGGCAAGATTGAA TCCAACCTGCGTGCACAGGCCACCGCACTGGCTTGCTGATCGCTTCGAGCTCATCGAA AAGGTTGTTGGCGACCTCGCACCTGGTTGGTGCGGGTGTAGATCCAGCAGACTTT 2641 AAGGTTGTTGGCGACCTCGCACTCCACCTCGTTGGTGCGGGTGGGATCCAGCAGACTTT 2821 TCCGAAGGCAAGGCACCTCTGACGAAGTTCCTGAGGAAGAGAGCAGCGCACCTCGACGT GATGATTCCAAGGAACGTCGCAACAGCCTCAACCGCCTGCTGTTCCCGAAGCCAACCGAA 2881 GATGATTCCAAGGAACGTCGCAATAGCCTCAACGCCTGCTGTTCCCGAAGCCAACCGAA GAGTTCCTCGAGCACCGTCGCCGCTTCGGCAACACCTCTGCGCTGGATGATCGTGAATTC TTCTACGGCCTGGTCGAAGGCCGCGAGACTTTGATCCGCCTGCCAGATGTGCGCACCCCCA GCCAACGTCAACGGCCAGATCCGCCCAATGCGTGTGCGTGACCGCTCCGTTGAGTCTGTC GGTGTTGTCACTGTGCTGTTGCTGAAGGTGAAGGTCAAGGCTGAAGATGCAGTCGCA 3241 GGTGTTGTCACCGTGACTGTTGCTGAAGGTGATGAGGTCAAGGCTGGAGATGAGATGAGGT 3301 ATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCTTCTGTTGACGGCAAAATCGAT TICTACGGACTGGTCGAGGCCGCGAGACTTTGATCCGCCTGCCAGATGTGCGCACCCCA 3121 GCCAACGTCAACGGCCAGATCCGCCCAATGCGTGTGCGTGACGTCTGCCGCTCCGTTGAGTCTGTC ACCGCAACCGCAGAAAAGGCAGATTCCTCCAACAAGGGCCATGTTGCTGCACCATTCGCT ACCGCAACCGCAGAAAAGGCAGATTCCTCCCAACAAGGGCCATGTTGCTGCACCATTCGCT

BCT 10-APR-2002

DNA

us-09-974-973-1.rge

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Ariyoshi, N., Nonaka, G., Kimura, E., Kawahara, Y. and Sugimoto, S. Corynebacterium efficiens pyruvate carboxylase (pyc) gene, complete CDS
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2 (bases 1 to 4851)
Nonaka,G., Akiyoshi,N. Kimura,E., Kawahara,Y. and Sugimoto,S.
Direct Submission
Direct Submission
Submitted (08-APR-2002) Gen Nonaka, AJINOMOTO CO., INC.,
FermentationsBiotechnology Laboratories; 1-1 Suzuki-cho, Kawasaki,
Kanagawa 210-8681, Japan (E-mall:gen nonaka@ajinomoto.com,
Tel:81-44-244-7139, Fax:81-44-244-4757)
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Best Local Similarity 78.7%; Pred. No. 0;
Matches 2734; Conservative 0; Mismatches 733; Indels 8;
                                                                        Corynebacterium efficiens DNA.

Corynebacterium efficiens
Bacteria, Firmicutes; Actinobacteria; Actinobacteridae;
Actinomycetales; Corynebacterineae; Corynebacteriaceae;
Corynebacterium.
   pyruvate
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/db xref="taxon:152794"
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CCCGTGAAGATCGGGGATCATTCCACCGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTA
          CCCGGGAGGACCGTGGCTCCTTCCACCGCTCCTTCGCCTCCGAGGCGGTGAGGATCGGAA
                                           CCGAGGGCTCACCCGTCAAGGCGTACCTCGATATTGATGAGATCATCAACGCCGCCAAGA
                                                                            CGGAATCCACCCCGAGCAAAAACATCGATGACATCGTTAAAAGCGCTGAAGGCCCAGACTT
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ACCGGTGATAAGTCTCGCGCGGTAACCGCCGCGAAGAAGAGGCTGGTCTGCCAGTTTTGGCG
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Pompejus, M., Kroeger, B., Schroeder, H., Zelder, O. and Haberhauer, G.
Corynebacterium gultamicum genes encoding proteins involved in
carbon metabolism and energy production
Patent: WO 0100844-A 121 04.JAN-2001;
BASF AKTISKGESELLSCHAFT (DE)
Location/Qualifiers
1. 1406
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/db xref="Laxon:1718"
CCACCTGCTGATGATGAGGAGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAAC 1600
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                                                                                                                                                                                                                              RESULT 13
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셤 8

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/note="SCP11.03"
/gene="SCP11.03"
/gene="SCP11.03"
/gene="SCF11.03"
/note="SCF11.03"
/note="SCF11.03"
/note="SCF11.03"
/note="SCF11.03"
/sensisinal coli, regulatory protein AsnC, 132 aa, fasta scores: opt: 222 z-score: 287.1 E(): 1.3e-08; 26.9%
/scores: opt: 222 z-score: 287.1 E(): 1.3e-08; 26.9%
/scores: opt: 222 z-score: 287.1 E(): 1.3e-08; 26.9%
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/product="putative transcriptional regulator"
/db_xref="G1: 6137025"
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/score: 10.10021
/scor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       /graf. 1065
/gene="SCF11.02"
/note="SCF11.02"
pimilar to TR:054197 (EMBL:AJ000671) Streptomyces
clavuligerus clavulante-9-aldehyde reductess, 247 aa;
fasta scores: opt: 501 z-score: 567.7 E(): 3e-24; 39.1%
identity in 238 aa overlap. Contains Pfam match to entry
PF00106 adh short, short chain dehydrogenase and prosite
match to entry PS00061 Short-chain dehydrogenases/reductases family signature also similar
to Streptomyces coelicolor SCF6.15c, 245 aa; fasta scores:
opt: 818 z-score: 805.2 E():0; 56.5% identity in 237 aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /codon start=1
/transl_table=11
/transl_table=11
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/product="putative oxidoreductase"
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/db_xxef="col: 6137024"
/db_xxef="color: 6137024
small overlap between neighbouring submissions. Cosmid F11 Overlaps with cosmid F6 on the Asel-F genomic restriction fragment. Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             short chain
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/gene="SCF11.02"
/note="PS00061 Short-chain dehydrogenases/reductases
family signature"
complement(1093. 1530)
/gene="SCF11.035"
/note="SCF011.035"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               function and the contry PF01037 ASNC_trans_reg, family, score 52.20, E-value 1.1e-11"
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/gene="SCF11.02"
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dehydrogenase, score 248.20, E-value 1.2e-70"
751. .837
                                                                                                                                                                                               'organism="Streptomyces coelicolor A3(2)"
                                                                                                                                                                                                               /strain="A3(2)"
/db xref="texon:100226"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             complement (1162. .1458)
/gene="SCF11.03c"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        1615. .2523
/gene="SCF11.04"
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1615. .2523
                                                                                                                                                                                                                                                                                                                                                                                                                                                                          /gene="SCF11.02"
/note="SC00522"
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The more significant matches with motifs in the PROSITE database are also included but some of these may be fortuitous. The length in codons is given for each CDS.

Usually the highest scoring match found by fasta -o is given for some binding site sequences are given where these have been used to deduce the initiation codon. Gene prediction is based on positional base preference in codons using specially developed Hidden Markow Model (Kroph et al., Nucleic Acids Research, 22(22):4768-4778(1994)) and the FramePlot program the pibb et al., Gene 30:157-66(1984) as implemented at the pib et al., Gene 30:157-66(1984) as implemented at the pib et al., Gene 30:157-66(1984) as implemented at the pib et al., Gene 30:157-66(1984) as implemented at initiation codon. Where possible we choose an initiation codon (act, geg, teg or (att)) which is preceded by an upstream initiation codon.

InflogNTNNI: This sequence (optimally 5-13bp before the most upstream initiation codon.

InflogNTNNI: This sequence MAY NOT be the entire insert of the sequenced clone. It may be shorter because we only sequence overlapping sections once, or longer, because we arrange for a
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       (bases 1 to 40104)

(cardeno, A.M., Parkhill, J., Barrell, B.G. and Rajandream, M.A.

Direct Submission

Submitted (26-OCT-1999) Streptomyces coelicolor sequencing project, anger Centre, Wellcome Trust Genome Campus, Hintron, Cambridge CB10 1SA E-mail: barrell@sanger.ac.uk Cosmids supplied by Prof. David A. Hopwood, [3] John Innes Centre, Norwich Research Park, On May 9, 2002 this sequence version replaced gi:6137022.
                                                                                                                                                                                                                                                                                                                                                                                              BCT 12-MAY-2002
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces coelicolor A3(2).
Streptomyces coelicolor A3(2)
Streptomyces coelicolor A3(2)
Streptomyces coelicolor A3(2)
Streptomyces coelicolor A3(2)
Actinomycetales; Streptomycineae; Streptomyces.

(bases 1 to 40104)
(bases 1 to 40104)
Kinashi, M., Keser, H.M., Denapaite, D., Eichner, A., Cullum, J., Kinashi, H., and Hopwood, D.A.
A set of ordered cosmids and a detailed genetic and physical map for the B Mb Streptomyces coelicolor A3(2) chromosome
Mol. Microbiol. 21 (1), 77-96 (1996)
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Streptomyces coelicolor sequencing at The Sanger Centre is funded by the BBSRC and Becwulf Genomics
Details of S. coelicolor sequencing at the Sanger Centre are available on the World Wide Web.
(URL; http://www.sanger.ac.uk/Projects/S coelicolor/) CDS are numbered using the following system eg SCTB7.01c. SC (S. coelicolor), 7B7 (cosmid name), 01 (first CDS), c (complementary
                                                                                                                                                                                                                                                                                                                            Streptomyces coelicolor cosmid F11.

AL12266.2 AL64588.2

AL12262.2 GI:20520901
3-oxoacyl-(acyl-carrier-protein) synthase; acyl carrier protein; acyltransferase; alpha-galactosidase; beta-hexosaninidase; cold shock protein; hydrolase; oxidoreductase; peptidase; protein; hydrolase; oxidoreductase; peptidase; protein; hydrolase; oxidoreductase; peptidase; protein; protein; protein; protein; respuisory protein; response regulatory protein; response regulator; sugar transmembrane protein; transcriptional regulator; streptomyces contein.
                                                                 CGCCTGAAGCAGCTTGGCCCAGCCGCG 1620
                                                                                                                        1381 CG-CTGAAGCAGCTTGGCCCAGCCGCG 1406
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                2 (bases 1 to 40104)
Seeger, K.J. and Harris, D.
Unpublished
                                                                                                                                                                                                                                                                                                                                                                                                                              DEFINITION
ACCESSION
VERSION
KEYWORDS
                                                                                                                                                                                                                                                                                           RESULT 14
SCF11/c
LOCUS
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JOURNAL
REFERENCE
AUTHORS
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JOURNAL
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AUTHORS
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32459 TACGAGCTCGGCGCGCGCACCGTCGCCGTCTTCCCGCACGAGGACCGCAATTCGCTGCAC 32400

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/gene="SCF11.06, possible oxidoreductase, len: 277 aa;
/mote="SCF11.06, possible oxidoreductase, len: 277 aa;
similar to TR:053622 (EMBL:AL021428) Mycobacterium
tuberculosis putative oxidoreductase MTV030.21c, 276 aa;
fasta scores: opt: 276 z-score: 329.4 E(): 5.6e-11; 24.7*
identity in 267 aa overlag and to SW:RRC PSEFL
(EMBL:AP031153) Pseudomonas fluorescens non-heme
chloroperodixase (EC 1.11.1.10) (chloride peroxidase)
(CPD-F) (chloropeorixidase F) Cpo or CpoF; fasta scores:
opt: 233 z-score: 279.3 E():3.5e-08; 26.1% identity in 283
aa overlag. Contains Pfam match to entry PF00561
//adfoclase, alpha/beta hydrolase fold"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Jene="SCF11.05"

/gene="SCF11.05"

/note="SCF11.05, hypothetical protein, len: 271 aa;
similar to various hypothetical proteins, e.g. TR:CAB45341

(EMBL:AL079345) Streptomyces coelicolor SCE68.05C

hypothetical 33.1 KD protein, 300 aa; fasta scores: opt:
808 z-score: 960.4 E(): 0; 53.2% identity in 250 aa
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        /codon start=1
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/transl_table=11
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/poduct==conserved hypothetical protein SCF11.05"
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WRQLWASDIPDNRILRWDEATGSVGYRPAPAGHSNGNTLYDGCRLVYCEGGNRRVTRT
BPDGRVTVLABRFDGRRLNDSVVRSDGTIWFSDFDFGITGSVEGHRAESEIGACN
VYRIDPVSGQNRLAADGFDGPNGVILTPDERRLFVSDSSRAAR HAFDIREDGTLSDGR
VFAEGRGDVHFDNIRFDDEGRLWAAALHDGVHCYDPDGTLIGRLRVPEEPVSNVAFGGP
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             .,
                                                     : 302 aa;
mobilis
                                                                                                                                                                                             scores:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APYILRTVDQITAFFDGLELVEPGVVPVTRWRPDADTEDPGLIGEHGGLARKP"
                                  /note="SCF11.04, possible gluconolactonase, len: 302 a similar to SW:GML_ZYMMO (EMBL:X67189) Zymomonas mobil: gluconolactonase precursor (EC 3.1.1.17)
D-glucono-delta-lactone lactonohydrolase; fasta score: 0pt: 326 z-score: 392.6 E(): 1.7e-14; 28.7% identity
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Gaps
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1.7e-280;
                                                                                                                                                                                                                                                                                                                                                                                                                             precursor
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Indels
                                                                                                                                                                                                                                                                                                                  /codon_start=1
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/product="possible_gluconolactonase
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         /product="possible oxidoreductase"
/protein_id="CAB59583.1"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             0; Mismatches 1215;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            KNNRLFITATTSLYSLVMSVTGAPRL"
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Score 1351;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                    /protein_id="CAB59581
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            2654. .3469
/gene="SCF11.05"
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/note="SCO0526"
                                                                                                                                                                                                                                                                           258 aa overlap"
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145 CTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGGATCATTCCAC 204

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	GGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCATGGTGGCGTCCA 1521 ACCAAGCTGCTGACCTACCTGGCGACGTCACGGTGAACAAGCGGCGGCGGCGCCC 31080 AAGGATGTTGCAGCCCAATCAAAGCTGCCAACATCAAGGATCTGCCGACTGCCACTGCCACGC 1581 AAGGATGTTGCAGCCCAATAAGCTGCCCAACATCAAGGATCTGCCACTGCCACGC 1581			TTTGAGGATCCGTGGAGCTCGAGGTGCGCGAGGCGATGCGAAGGTT 1881	CGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCTCGCACTCTCCGCATCTTCGACGC 2001 GACGCCTTCGTGCAGGAGGCGCCGCCGCCGCACCGGCATCTTCCGACGCC 30603 GTAAACGACGCCCCAGAGGAGGCGCCGCCACCGGCATCTTCCGACGCTCTCGACGCC 30603 CTTAAACGACGTCCAGAAGCGGTCCAGACAACCACCGGC 2061 CTTAAACGACGTCCAGAGGCCCGCCCCCCCCCTCCGAGGCCCACCGGC 20513 CTCAACGACGTCGAGCAGATGCGGCCCGCCATCGAGGCCGTACGGCAGACCGGCAGCGCC 30543	GINGCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAAGCTCTAC 2121	
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2542 TACCGCCACGAATCCCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTG 2601
30062 TACCACCACGAGATTCCCGGCGGCGGCCACTCTCCAACCTGCGCACCCAGGCCGTCGCGCTC 30003 AGGTCGACCT---CGACCCCGGCGTCGGCTCGAACTCCAGCCGGTCGGCGAC 29481 Arcacedececenanteces de contra de co CCAGACGATAAGGGTATGCGCAATGTTGTGGCCAACGTCAACGGCCAGATCCGCCCAATG 3201 ATCACTGCTTCTGTTGACGCCAAGATTGAACGCGTTGTGGTTCCTGCTGCTACGAAGGTG 3441 CCACTGTCTGGCACCACCTCCCAGCCATCCTGTCTGCCATTGTTGCTGCATTCGCGCAC 2421 30122 AGCGTCCGCAAGGTCTACGCCCCCGTTCGAGGCCGGCCTGGCCTCCCCGAACGGCCGGGCTC GTTGGTGCGGGTGTAGATCCAGCAGACTTTGCTGCAGACCCACAAAAGTACGACATCCCA TTGATCCGCCTGCCAGATGTGCGCACCCCCACTGCTTGTTCGCCTGGATGCGATCTTGAG AACAAGGGCCATGTTGCTGCACCATTCGCTGGTGTTGTCACTGTGACTGTTGCTGAAGGT GATGAGGTCAAGGCTGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACA TCCATGGCGGGCACCACTTCGCAGCCGTCGCTGGCGGATCGTGGCCGCCACCGACCAC CCTGAGGAAGAGCAGCGCCCTCGACGCTGATGATTCCAAGGAACGTCGCAACAGCCTC AACCGCCTGCTGCTCCCCGAAGCCAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGC GCTGTGCGCGGACTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAACCGGTCGCGTC GAAGGIGGCGACTIGAICGICGICGTITCCIAA 3474 8 4 8 6 8 6 8 6 8 6 Pp g G B 6 B 6 B 6 B 6 B 6 B 6 6 B 6 g P 8 중 음 8 B 8

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/note="ORF2; contains N-6 adenine-specific DNA methylase signature, PS00092; similar to hypothetical protein MLCB1243.09 of Mycobacterium leprae encoded by GenBank Accession Number AL023635 and to hypothetical protein Rv2966c of Mycobacterium tuberculosis strain H37Rv encoded by GenBank Accession Number Z83018"
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WEAVRKVYAPFESGLPGPTGRVYTHEIPGGQLSNLRQQAIALGLGGBRFEBIEANYAA
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PROPRPELFRYKALQSRGPARPVEKLTADDEALLAQPGPKRGAALURLEPEFPARFEA
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NGQLRPVLVRDRSIAAEFVDAAEKADRNNADHIAAPFAGVVTVGVAEGDSVDAGGTIAT
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/gene="pyc"
/note="Region: PS00188 biotin-requiring enzymes attachment
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/gene="pyc"
/note="Region: PS00165 serine/threonine dehydratases
pyridoxal-phosphate attachment site"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          784 TGTCGGTCGACGAGATCATCCGCGTCGCCAAGCATTCGGGCGCCGACGCGGTGTACCCGG
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          386 CTTTTATTGGCCCAACCCCAGAGGTTCTTGATCTCACCGGTGATAAGTCTCGTGCGGTAA
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1455. .1478
1965- pyc"
/note="Region: PS00867 carbamoyl-phosphate
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0; Mismatches 1257;
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38.3%; Score 1329.8;
Best Local Similarity 62.6%; Pred. No. 6.9e-
Matches 2123; Conservative 0; Mismatches 3
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/transl_table=11
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/note="ORF2;
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/gene="pyc"
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/gene="pyc"
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/ gene="pyc"
600. 9823
/ gene="pyc"
/ EC number="6.4 1.1"
/ EC number="Are-dependent pyruvate carboxylase"
/ note="purified native enzyme shows ATP-dependent pyruvate carboxylase activity in vitro; NH2-terminus of mature PYC protein confirmed by Edman degradation"
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/transl_table=11
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/product=hypothetical integral membrane protein"
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/db_xref="G1:11118648"
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CGSWWTWGASLPGFPNPLIGIVAFSVVLVTGVLAVAGVRLPRWYWAGLATGTALGAV
FVHWLIFQSLYRIGALCPYCMVWAAVTIPLAVVTAVIALRARAGDADAGPGNIVHQWR
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ADESYQIGEVGHPVRAYLSVDEIIRVAKHSGADAVYPGYGFLSENPDLAAKCAEAGIT
FVGPSAEVLQITGNKARAIAAARAAGLPVLSSSEPSSSVDELMAAAADMEFPLFVKAV
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NOWHLI-ERDCSVQRRHQVVVELAPAPILSDELIADOLOADAVAPARQI COYSCAGTVEF
LLDERGHHVR IECNB LQVEHTVTEETTDVDLVSSQLR IAAGEFLADLGLSQDRLVVR
GAAMQCRITTEVPANGFRPDTGRITAYRSPGGAGIRLDGGTNLGAEISAHFDSMLVKL
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LTSRSPADRGTRILNYLADITVNKFHGERPSTVYPQDKLPPLDLQAPPPAGSKQRLVB
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Mukhopaddyay, B. and Purwantini, E.
Pyruvate carboxylase from Mycobacterium smegmatis: stabilization,
rapid purification, molecular and biochemical characterization and
regulation of the cellular level
Biochim. Biophys. Acta 1475 (3), 191-206 (2000)
                                                                                                                                                                                                                                                                                    AF262949 DNA linear BCT 07-NOV-200 Mycobacterium smegmatis hypothetical integral membrane protein gene, partial cds; pyruvate carboxylase (pyc) gene, complete cds; and hypothetical methyltransferase gene, partial cds.
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Mukhopadhyay, B. and Purwantini, E.
Direct Submission
Submitted (02-MAY-2000) Microbiology, University of Illinois, 601
South Goodwin Avenue, Urbana, IL 61801, USA
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Mycobacterium smegmatis
Bacteria, Firmicutes, Actinobacteria, Actinobacteridae,
Actinomycetales, Corynebacterineae; Mycobacteriaceae,
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/db_ref="taxon:1772"
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/transl_table=11
/product="pyruvate_carboxylase"
/protein_id="AAG30411.1"
/db_xref="GI:11118649"
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JOURNAL
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ر کو ع	1646	ACGCACTGGCAGTTACTGATACCACCTTCCGCGATGCACACCAGTCTTTGCTTGC
oy Db	1706	GAGTCCGCTCATTCGCACTGAAGCCTGCGCAGAGGCCGTCGAAAGCTGACTCCTGAGC 1765 1 1 1 1 1 1 1 1 1
상 임	1766	TITIGECCGEGGAGCCTGGGGCGGCGCGACCTACGATGTGGCGATGCGTTTCCTCTTTG 1825
Oy Dp	1826	AGANTCCGTGGGGAGGGTCGAGGGGGGGGGGGGGGGGGGG
oy B	1886	TGCTGCTTCGCGGCCGCAACACCGTGGGATACACCCCGTACCCAGACTCCGTCTGCCGCG 1945
Oy Op	1946	CGTTIGITAAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCCACGCGCTTA 2005
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9 9	2066	CCGAGGTGGCTATGGTGATCTCTCTGATCCAAATGAAAGCTCTACACCC 2125
දු පු	2126	TGGATTACTACCTAAAGATGGCAGAGATCGTCAAGTCTGGCGCTCACATTCTGGCCA 2185
Oy Dp	2186	TTAAGGATATGGCTGGTCTGCCCCAGCTGCGGTAACCAAGCTGGTCACCGCACTGC 2245
9 9	2246	GCCGTGAATTCGATCTGCCAGTGCACACCCACGACACTGCGGGTGGCCAGTTGG 2305
oy og	2306	CTACCTACTTGCTGCAGCTCAAGCTGGTGCAATGCTGTTGACGGTGCTTCCGCACCAC 2365
Q D	2366	IGCTGGCACCACCAGCCATCCTGTCTGCATTGTTGCTGCATTCGCGCACACCC 2425
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ò	2606	TTGCTGATCGCTTCGAGCTCCATCGAAGACAACTACGCAGCCGTTAATGAGATGCTGGGAC 2665

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/*tag= a
/product= "Corynebacterium glutamicum feedback-resistant
pyruvate carboxylase enzyme"
/transl_except= (pos:1..3; aa:Met)
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ABK63659
ABM96532
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Hanke PD;

WPI; 2002-463267/49. P-PSDB; AAU98050.

Novel mutated, feedback resistant pyruvate carboxylase enzyme Polypeptide, useful for producing amino acids e.g. L-lysine, L-threonine, L-glycine, L-glutamic acid, L-proline and L-methionine and L-isoleucine

Claim 3; Fig 1; 42pp; English.

The present invention relates to a new mutated, feedback-resistant pyruvate carboxylase enzyme. The invention is useful for producing an pyruvate carboxylase enzyme. The invention is useful for producing an amino acid (e.g. L-lys, L-Thr, L-Met, L-Tle, L-Glu, L-hrg and L-bro), by culturing a host cell in a suitable media and separating the amino acid from the medium. The vector of the invention is useful for replacement of a wild-type pyruvate carboxylase gene, with a feedback resistant pyruvate carboxylase gene, in a Corynebacterium glutamicum, by replacing a genomic copy of the wild-type pyruvate carboxylase gene with a selectable marker gene through homologous recombination to form a first recombination strain, and replacing the selectable marker gene in the first recombinant strain, with feedback resistant pyruvate carboxylase carb

Seguence 3474 BP; 749 A; 1013 C; 950 G; 762 T; 0 other;

ö 180 240 240 300 GAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAA 300 360 420 480 480 180 360 420 Gaps CACACATCTTCAACGCTTCCAGCATTCAAAAAGATCTTGGTAGCAAACCGCGGGGAAATC 120 9 GTGACTGCTATCACCCTTGGCGGTCTCTTGTTGAAAGGAATAATTACTCTAGTGTCGACT 60 GAATCCACCCCGAGCAAAAACATGGATGACATCGTTAAAAGCGCTGAAGGCCAGACTTAC 1 GTGACTGCTATCACCCTTGGCGGTCTCTTGTTGAAAGGAATAATTACTCTAGTGTCGACT 121 GCGGTCCGTGCTTTCCGTGCAGCACTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCC ACCGGTGATAAGTCTCGTGCGGTAACCGCCGCGAAGAAGGCTGGTCTGCCAGTTTTGGCG GAATCCACCCCGAGCAAAAACATCGATGACATCGTTAAAAGCGCTGAAGGCCAGACTTAC GCGGTCCGTGCTTTCCGTGCAGCACTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCC CGTGAAGATCGGGGGATCATTCCACCGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACT CGTGAAGATCGGGGATCATTCCACCGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACT GAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAA GTTAAAGCAGATGCTATTTACCCGGGATATGGCTTCCTGTCTGAAAATGCCCAGCTTGCC ACCGGTGATAAGTCTCGTGCGGTAACCGCCGAAGAAGAAGGCTGGTCTGCCAGTTTTGGCG Query Match 100.0%; Score 3474; DB 24; Length 3474; Best Local Similarity 100.0%; Pred. No. 0; Matches 3474; Conservative 0; Mismatches 0; Indels 0; ч 61 61 121 181 181 241 241 301 301 361 361 421 421 481 481 q ò 8 ð 요 ò ò g 8 & g g ઠે Ω à a ò g ₹

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                                                                                                                                                                                           AAGGCACCTCTGAGGAAGATTCCTGAGGAAGAGCAGGCGGACCTCGACGCTGATTCC
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/product=.Pyruvate carboxylase
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                                                                                                                                                                                                                                        The pyruvate carboxylase of Corynebacterium glutamicum can be used for producing amino acids, preferably lysine and glutamic acid in industrial fermentations and for replenishing oxaloacetate consumed for biosynthesis during growth. By incorporating the pyruvate carboxylase gene in expression vectors levels of expression can be 2 - 20 fold higher than in Corynebacterium glutamicum.
                                                                                                                                                                       Novel polynucleotides encoding Corynebacterium glutamicum pyruvate carboxylase useful for industrial fermentation processes comprises
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           GAATCCACCCCGAGCAAAACATCGATGAGATCGTTAAAAGGCGTGAAGGCCTGAGACTTAC
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97.8%; Score 3398.8; DB 21; Length 3621;
Best Local Similarity
98.6%; Pred. No. 0;
Matches 3427; Conservative 0; Mismatches 47; Indels 0; 0
                                                                                                                                                                                                                                                                                                                      Sequence 3621 BP; 782 A; 1037 C; 1002 G; 800 T; 0 other;
                                                                                                                Willis LB;
                                                                                                                                                                                                                    Claim 3; Fig 1; 51pp; English.
                                                                                                                                                                                               specific nucleotide sequence
                                             98WO-US27301
                       98WO-US27301
                                                                                                                Sinskey AJ, Lessard PA,
                                                                 (SINS/) SINSKEY A J.
(LESS/) LESSARD P A.
(WILL/) WILLIS L B.
                                                                                                                                       WPI; 2000-465746/40.
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1708 AAGAATCTGCCACTGCCAGCGGTTCCCGTGACCGCTGAAGCAGCTTGGCCCAGCCGG 1767
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                      CTTGGCGGATCGCACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCACTGCAGCGT
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CCTGATGAGCTCCGCAAATTGGCAACAGAAGCATCTCGTGAAGCTGAAGCGGCATTCGGC
                                                                               GACGGTTCGGTATATGTCGAACGTGCTGATTAACCCCCAGCACATTGAAGTGCAGATC
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	2761 CCACAAAAGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGGGGGGGG	ò
PR 23-DEC-1998; 98US-0220081.		염
AA PF 23-DEC-1998; 98US-0220081. XX	GGCGACCTCGCACTCCACCTGGTTGGTTGCTGGGGTGTACCAGCAGACTTTGCTGCAGAC	ò
XX PD 09-JAN-2001.	20%1 GCAGCCGTTAATGCTGCGAGACGCCCAACCAAGGTCACCCCATCCTCCAAGGTTGTT 2700 2788 GCAGCCGTTAATGCTGCTAGGAGACCAACCAACCAACCAA	S 8
XX PW US6171833-B1.	-GAIGCGTALABACCACCACACAGGGCCTTGCGGATCGTTTCGAACTCATCGAAGACAACTAC GCAGCCGTTABACACACATGCTGGAACGCCCTABACGTTAACAACAACAAACAAA	3 6
Corynebac	2581 CGTGCACAGGCCACCGCCACTGGGCCTTGCTGATCGCTTCAAGCAACTAC 2640 2728 CGTGCACAGGCCACCACACACACACACACAACAACAACAACAA	8 8
AA KW Pyruvate carboxylase; anaple KW oxaloacetate: ds.		qq
XX DB Corynebacterium glutamicum p	2521 CCAGGCCCAACCGGTCTACCGCCACGAAATCCCAGGCGGACAGTTGTCCAACCTG 2580	ò
AC AAF32165; XX DT 12-APR-2001 (first entry)	2401 GARCICOARCOARCOARCOGGAACTGTACCOGGAACTGTACTGCATTTGAGTCTGATCC 2520 2608 GACCTCGAGCCGTACTGGGAAGCAGTGCGCGACTGTACCTGCATTTGAGTCTGGAACC 2667	S &
ID AAF32165 standard; DNA; 3621 XX	ATTGTTGCTGCATTCGCGCACACCCGTCGCGATTTGAGCCTCGAGGCTGTTTCT	ය ර
RESULT 3	2401 ATTGTTGCTGCATTCGCGCACACCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCT 2460	ò
	2341 GCTGTTGACGGTGCTTCCGCACCACTGTCTGGCACCACCCCCGGCCATCCCTGTCTGCC 2400	B &
Db 3508 GCTATGAAGATGGAAGCAACAAT	2281 CACGACACTGCCGGTGGCCAGTTGGCTACTTTGCTGCAGCTCAAGCTGGTGCAGAT 2340 [B &
3448	2221 GTAACCAAGCTCGCACTGCGCCCTGAATTCGATCTGCCAGTGCACGTGCACACC 2280	ð 8
Db 3388 GCAGAAAAGGCAGATTCCTCCAA		요
	AAGTCTGGCGCTCACATTCTGGCCATTAAAGGATATGGCTGGTCTGCCTCGCCCAGCTGCG	õ
OY 3181 AACGGCCACATCCGCCCATGCC	2101 GATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTC 2160 2248 GATCCAAATGAAAAGCTCTACACCCTGGATTACTACAAAGATGCAAAAGCTCTACACCTACACCTAAAGATGCAAAAGCTCTACACCCTGGATTACTACAAAGAAAG	\$ A
3121	2041 GTCCTGGAGACCAACACCGCGGTAGCCGAGGTGGCTTATTCTGGTGATCTCTCT 2100	රු පු
3208	1981 ATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGCAATCGACGCA 2040 	& 8
3148	1921 CCGTACCCAGACTCCGTCTGCCGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGAC 1980	8 8
Db 3088 AAGGACGTCGCAATAGCCTCAA	1861 GCGATGCCGAATGTAAACATTCAGATGCTGCTGGGCCGCAACACCGTGGGATACACC 1920 	& 43
3028	1801 GAIGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGGGACTCGACGAGCTGCGCGAG 1860 	S &
2968	1741 GCCGTCGCAAAGCTGACTCTTGAGCTTTTGTCCGTGGAGCCTGGGGCGGGC	& 8
2908	1681 GCACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAG 1740	& a

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3ACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAAC 2967
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                                                               CACTGCGCACCCGCGCACTGGAAGGCCGCTCCGAAGGC
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                                                                                                                         The present invention provides the protein and coding sequences of the Corynabacterium glutamicum pyruvate carboxylase protein. This is an enzyme in the anaplerotic pathway. It can be used in the replenishment oxaloacetate consumed during lysine and glutamic acid production in
                                                       Novel nucleic acid encoding pyruvate carboxylase from Corynebacterium glutamicum, for replenishing oxaloacetate consumed during lysine and glutamic acid production in industrial fermentations -
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                                                                                                                                                                                                                   Score 3398.8; DB 22; Length 3621;
Pred. No. 0;
); Mismatches 47; Indels 0; 0
                                                                                                                                                                                              Sequence 3621 BP; 782 A; 1037 C; 1002 G; 800 T; 0 other;
                                                                                                     Claim 2; Column 23-30; 29pp; English
  Willis
                                                                                                                                                                                                                   Ouery Match
Best Local Similarity 98.6%; Promatches 3427; Conservative 0;
                                                                                                                                                                         industrial fermentation.
  PA,
  Lessard
                       WPI; 2001-122330/13.
P-PSDB; AAB67129.
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derived from Coryneform bacteria, for identifying one, measuring expression of a gene, analysing pattern of a gene and identifying homologous gene
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    amino acid synthesis; vitamin; saccharide;
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Ikeda M, Ozaki A;
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The present invention provides a number of nucleotide and protein are dequences from the Corpreform bacterium Corprebacterium glutamicum. These are useful for identifying the mutation point of a gene derived from a mutant of coryneform bacterium, measuring expression amount and analysing the expression profile or expression pattern of a gene derived from Corpreform bacterium, and identifying a homologue of a gene derived from corpreform bacterium. Corpreform bacterium, corpreform bacterium, corpreform bacterium corpreform bacterium are useful for producing amino acids, nucleic acids, vitamins, saccharides and organic acids, in the exemplification of the invention.

Note: The sequence data for this patent did not form part of the printed Buronean Patent Office.
                     Disclosure; SEQ ID NO: 7061; 246pp + Sequence Listing; English.
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S S	Sequence	ice 349980 BP; 79274 A; 90638 C; 98727 G; 81341 T; 0 other;
υμ2	Query Match Best Local Matches 342	tch al Similarity 98.6%; Pred. No. 0; 3427; Conservative 0; Mismatches 47; Indels 0; Gaps 0;
Ş 8	1 G 105160 G	GTGACTGCTATCACCCTTGGCGGTCTTCTTGAAAGGAATAATTACTCTAGTGTCGACT 60
à i	61	120
8 8 8	105220 C 121 G 105280 G	CACACATCTTCAACGCTTCCAGCATTCAAAAGATCTTGGTAGCAAACGGGGGGAAATC 105279 GCGGTCCGTGCTTTCCGTGCAGCACTCGAAACCGGGCGCGCGGGTAGCTATTTACCC 180
දු දු	181 C 105340 C	GGTGAAGATCGGGGATCATTCCACCGCTCTTTTTGCTTCTGAAGCTGTCCGCATTGGTACT 240
8 8	241 G 105400 G	GAAGGCTCACCAGTCAAGGCGTACCTGGACATGAAATTATCGGTGCAGCTAAAAAA 300
පු ද	301 G 105460 G	GTTAAAGCAGATGCTATTTACCCGGGATATGGCTTCCTGTCTGAAAATGCCCAGCTTGCC 360
g g	361 C	CGCGAGTGCGCGGAAAACGGCATTACTTTATTGGCCCAACCCCAGAGGTTCTTGATCTC 420
8	421 A 105580 A	ACCGGTGATAAGTCTCGTGCGGTAACCGCCGCGAAGAGCTGGTCTGCCAGTTTTGGCG 480
\$ B	481 G 105640 G	GAATCCACCCGGAGCAAAAACATCGATGACATCGTTAAAAGCGCTGAAGGCCAGACTTAC 540
B 6	541 C	CCCATCTITGIAAAGGCAGITGCCGGTGGTGGCGGGTGATGCGCTTIGITTCTICA 600
B &	601 C	CCTGATGAGCTCCGCAAATTGGCAACAGAACCTCGTGAAGCTGAAGCGGCATTCGGC 660
B &	661 G 105820 G	GACGGTICGGTATATGTCGAACGTGCTGTGATTAACCCCCAGCACATTGAAGTGCAGATC 720
δ	721 0	CTTGGCGATCGCACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCACTGCAGCGT 780

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q	105880	CTTGGCGATCACACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCACTGCAGCGT	105939
\$ A	781	CACCAAAAGTTGTCGAAATTGCGCCAGCACAGCATTTGGATCCAGAACTGCGTGAT 	
ò	841	GGATTTGTGCGGATGCAGTAAAGTTCTGCCGCTCCATTGGTTACCAGGCGCGGGAACC	
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ð í		CAGGITGAGCACCGCGCACCTGAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATG	1020
an i	106120	CAGGITTGAGCACACTGTGACTGAAAGACACAGAGGTGGAGGTGGACCTGGGGACGAGAAGATGAAAGAAGAAGAAGAAAGA	0000
ko a	1021	CGCTTGGCTGCTGGTGGTGCTTGAGGGATTGGGTTTGAGTTGAGTTGAGCCTGAGAGAAAAAAAA	106239
ò	н	CACGGGGCAGCAGCGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCA	1140
g	106	CACGGTGCAGCACTGCAGTGCCGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCA	106299
& A	1141	GATACCGGAACTATCACCGCGTACCGCTCACCAGGCGGAGCTGGCGTTCGTCTTGACGGT	1200
δ d	106	GCAGCTCAGCTCGGTGGCGAAATCACCGCACACTTTGACTCCATGCTGGTGAAAATGACC	1260
ò	-	TGCCGTGGTTCCGACTTTGAAACTGCTGTTGCTCGTGCACAGCGCGCGTTGGCTGAGTTC	1320
· 6	106420		106479
ò	1321	ACGIGICTGGGGTGTGCAACCAATGGTTCTTGCGTGCGTTGCTGCGGGAAGAGGAC	1380
අ	106480	ACCGTGTCTGGTGTTGCAACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGC	106539
S S S	106	TTGACTTCCGAGGGCATGGCAACGGGATTTATGGGGGATCACCGAACCTCTTCAAGGT 	1440
ογ	7	CCACCTGCGGATGATGAGCAGGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAAC	1500
qq	106	CCACCTGCTGATGATGAGGAGGGACGCATCCTGGATTACTTGGCAGATGATCACCGTGAAC	106659
ò	Т	AAGCCTCATGCTGTGCGTCCAAAGGATGTTGCAGCACCAATCGATAAGCTGCCCAACATC	1560
QQ	106	AAGCCTCATGGTGTGCGTCCAAAGGATGTTGCAGCTCCTATCGATAAGCTGCCTAACATC	106719
ζ	н	AAGGATCTGCCACTGCCACGCGGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGCCGCG	1620
qq	106	AAGGATCTGCCACTGCCACGCGGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGGCGGCG	106779
Qy do	106	TITGCTCGTGATCTCCGTGAGCAGGCGCACTGGCAGTTACTGATACCACCTTCCGCGAT	1680
ò	1681	GCACACCAGTCTTTGCGTTGCGACCCGGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAG	1740
qu		GCACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGCCAGAG	106899
ò		GCCGTCGCAAAGCTGACTTCTCAGCTTTTGTCCGTGGAAGCCTCGGGCGGCGCGCCACCTAC	1800
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1861 GCGATGCCGAATGTAACATTCAGATGCTGCTCGCGCCGAACACCCGTGGGATACACC 1920	2401 ATTGTTGCTGCATTCGCGCACACCGGTGCGGTTTGAGCCTCGAGGCTGTTTCT 2460

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This invention describes the isolation of a pyruvate carboxylase from Corynebacterium glutamicum which is used in a novel method for production of lysine, threonine, homoserine, glutamate and/or arginine, variously useful as feed additives, condinents, pharmaceuticals and intermediates for fine chemicals. Increasing pyruvate carboxylase activity increases the yield of microbial production of amino acids of the asparate and/or glutamate families, e.g. about 50% more lysine, 40% more threonine and 150% more homoserine are secreted into the culture medium. Increasing microbial production of specific amino acids by increasing activity or expression of pyruvate carboxylase Claim 16; Page 8-11; 18pp; German.

Sequence 3728 BP; 813 A; 1059 C; 1035 G; 821 T; 0 other;

; Gaps Ouery Match

97.8‡; Score 3397.2; DB 20; Length 3728;
Best Local Similarity 99.6‡; Pred: No. 0;
Matches 3426; Conservative 0; Mismatches 48; Indels 0; 0

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1313 1320 1380 1500 1560 1673 1620 1680 1020 1080 1193 1253 1373 1440 1553 1613 1793 1740 1800 1013 1073 1140 1260 1433 1133 900 960 953 1321 ACCGIGICTGGIGITGCAACCAACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGAAA 1434 ACCGIGICTGGTGTTGAACCAACAATGGTTTCTTGCGGTGCGTTGCTGCGGGAAGAGGAC 1434 ACCGIGTCTGGTGTTGAACCAACCAACAATGGTTTCTTGCGGGGGTTGCTGCTGCGGAAGAAGAA 1381 TICACTICCAAGCGCATCGCCACCGGATTTATCGCCGATCACCCACACCTCCTTCAGGCT
1494 TICACTICCAAGCGCACCGCACCGGATTCATTGCCGATCACCGGCACCTCCTTCAGGCT GCCGTCGCAAAGCTGACTCCTGAGCTTTTGTCCGTGGAGGCCTGGGGCGGCGCGACCTAC 1194 CACGGIGCAGCACTGCAGGTGCCGCATCACCACGAAGATCCAAAAAACGGCTTCCGCCCA CCACCTGCGGATGATGAGCAGGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAAC AAGCCTCATGGTGCGTCCAAAGGATGTTGCAGCACCAATCGATAAGCTGCCCAACATC 1734 TTTGCTCGTGATCTCCGTGAGCAGGACGCACTGGCAGTTACTGATACCACCTTCCGCGAT GCACACCAGTCTTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAG GCACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGCAGAG GCCGTCGCAAAGCTGCTGAGCTTTTGTCCGTGGAGGCCTGGGGCGCGCGACCTAC CGCATTTGTGCGGATCCAGTAAGTTCTGCCGCTCCATTGGTTACCAGGGCGCGGAACC GTGGAATTCTTGGTCGATGAAAAGGGCAACCACGTTTTCATCGAAATGAACCCACGTATC CAGGTTGAGCACCCGTGACTGAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATG CACGGTGCAGCACTGCAGTGCCGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCA GCAGCTCAGCTCGCGCAAATCACCGCACACTTTGACTCCATGCTGGTGAAAATGACC AAGGATCTGCCACTGCCACGCGGTTCCCGTGACCGCCTGAAGCAGCTTGGCCCAGCCGCG TTTGCTCGTGATCTCCGTGAGCAGGACGCACTGGCAGTTACTGATACCACCTTCCGCGAT 954 1014 196 1254 1201 1441 1501 1561 1621 1794 841 901 1074 1081 1141 1681 1854 8 6 o d d 중 점 S q οp QQ qq g g qq qq qq à g S S 장염 B & ò ò ò à 셤 ò ò ò ò 8

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2000JP-0280988.
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Novel polynucleotides derived from Coryneform bacteria, for identifying mutation point of a gene, measuring expression of a gene, analysing expression profile or pattern of a gene and identifying homologous gene
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                                                                                                                                                                                                                              CGCCTGGATGCGATCTCTGAGCCAGACGATAAGGGTATGCGCAATGTTGTGGCCCAACGTC
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                                                           GAGCACCGTCGCCGTTCGGCAACACCTCTGCGCTGGATGATCGTGAATTCTTCTACGGA
                                                                                                                                                                                                          CGCCTGGATGCGATCTCTGAGCCAGACGATAAGGGTATGCGCAATGTTGTGGCCAACGTC
                                                                                                                                                                                                                                                                                     AACGGCCAGATCCGCCCAATGCGTGACCGCTCCGTTGAGTCTGTCACCGCAACC
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Ozaki A;
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Ikeda M,
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English

The present invention provides a number of nucleotide and protein seguences from the Coryneform bacterium Corynebacterium glutamicum. These are useful for identifying the mutation point of a gene derived from a mutant of coryneform bacterium, measuring expression amount and analysing the expression profile or expression pattern of a gene derived from Coryneform bacterium, and identifying a homologue of a gene derived from coryneform bacterium. Coryneform bacterium and identifying a homologue of a gene derived amino acids, nucleic acids, vitamins, saccharides and organic acids, particularly L-lysine. The present sequence is a nucleic acid described in the exemplification of the invention.

Note: The sequence data for this patent did not form part of the printed specification, but was obtained in electronic format directly from the European Patent Office. 765; 246pp + Sequence Listing; SEQ ID NO: Claim

Sequence 3420 BP; 732 A; 1004 C; 939 G; 745 T; 0 other;

ö 591 540 651 009 711 99 771 831 120 231 180 291 240 351 300 411 360 471 420 531 480 171 GTGTCGACTCACACATCTTCAACGCTTCCAGCATTCAAAAAGATCTTGGTAGCAAACCGC 111 Gaps 9 112 GGCGAAATCGCGGTCCGTGCTTTCCGTGCACTCGAAACCGGTGCAGCCACGGTAGCT ATTGGTACCGAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCA CAGCTTGCCCGCAGAGTGCGCGGAAAACGGCATTACTTTATTGGCCCAACCCCAGAGGTT
CAGCTTGCCCGCGAGTGCGGGAAAACGGCATTACTTTATTGGCCCAACCCCAAGGTT
CAGCTTGCCGGCGAAGTGGGGAAAACGGCATTACTTTATTGGCCCAACCCCAAGGTT GCTTTCGGCGATGGCGCGGTATATGTCGAACGTGCTGTGATTAACCCTCAGCATATTGAA CTGCAGCGTCGTCACCAAAAAGTTGTCGAAATTGCGCCAGCACACACTTTGGATCCAGAA ATTGGTACTGAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCA CTTGATCTCACCGGTGATAAGTCTCGTGCGGTAACCGCCGCGAAGAAGGCTGGTCTGCCA CTTGATCTCACCGGTGATAAGTCTCGCGCGGTAACCGCCGCGAAGAAGAAGGCTGGCCA GTTTTGGCGGAATCCACCCCGAGCAAAAACATCGATGACATCGTTAAAAAGCGCTGAAGGC CAGACTTACCCCATCTTTGTAAAGGCAGTTGCCGGTGGTGGCGGACGCGGTATGCGCTTTT GITTCTTCACCTGATGAGCTCCGCAAATTGGCAACAGAAGCATCTCGTGAAGCTGAAGCG GCATTCGGCGACGGTTCGGTATATGTCGAACGTGCTGTGATTAACCCCCAGCACATTGAA GTGCAGATCCTTGGCGATCGCACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCA GTGCAGATCCTTGGGGATCACACTGGAGAAGTTGTACACCTTTATGAACGTGACTGCTCA 1 GIGTCGACTCACACACTTTCAAAGGCTTCCAGCATTCAAAAGATCTTGGTAGCAAACGC 61 GGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCACTCGAAACCGGTGCAGCGCACGGTAGCT ATTTACCCCCGTGAAGATCGGGGATCATTCCACCGCTCTTTTGCTTCTGAAGCTGTCCGC Query Match
96.3%; Score 3344.8; DB 22; Length 3420;
Best Local Similarity 98.6%; Pred. No. 0;
Matches 3373; Conservative 0; Mismatches 47; Indels 0; 241 481 541 22 172 232 181 292 352 301 412 361 472 421 532 592 652 601 712 661 772 g ò a ð gg ò g 8 g ò g ò g ð 셤 ò qq ò g ò ò р ò g

1800 1911 1080 1191 1140 1251 1200 1311 1260 1371 1320 1431 1380 1491 1440 1551 1500 1611 1560 1671 1620 1680 1791 1851 1860 GCGCAGATGCGCTTGGCTGGTGCAACCTTGAAGGAATTGGGTCTGACCCAAGATAAG 1020 1731 1011 1131 1071 960 951 CTTGACGGTCGAGCTCGGCTGGCGAATCACCGCACACTTGACTCCATGCTGGTG CTTCAGGCTCCACCTGCTGATGATGAGGAGGACGCATCCTGGATTACTTGGCAGATGTC GCGCAGATGCGCTTGCTGGTGCAACCTTGAAGGAATTGGGTCTGACCCAAGATAAG GAAGAGGACTICACTICCAAGCGCATCGCCACCGGATTTATCGGCGATCACCCACACCTC CTTCAGGCTCCACCTGCGGATGATGATGAGCAGGGACGCATCCTGGATTACTTGGCAGATGTC ACCGTGAACAAGCCTCATGGTGTGCGTCCAAAGGATGTTGCAGCACCAATCGATAAGCTG ACCGTGAACAAGCCTCATGGTGTGCGTCCAAAGGATGTTGCAGCTCCTATCGATAAGCTG CTTGACGGTGCAGCTCAGCTCGGTGGCGAAATCACCGCACACTTTGACTCCATGCTGGTG CCCAACATCAAGGATCTGCCACTGCCACGCGGTTCCCGTGACCGCCTGAAGCAGCTTGGC CCAGCCGCGTTTGCTCGTGATCTCCCTGAGCAGGACGCACTGGCAGTTACTGATACCACC TTCCGCGATGCACACCAGTCTTTGCTTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCT TTCCGCGATGCACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCT GCGACCTACGATGTGCGTTTCCTCTTTGAGGATCCGTGGGACAGGCTCGACGAG ATCAAGACCCACGGTGCAGCACTGCAGTGCCGCATCACCACGGAAGATCCAAACAACGGC TTCCGCCCAGATACCGGAACTATCACCGCGTACCGCTCACCAGGCGGAGCTGGCGTTCGT TTCCGCCCAGATACCGGAACTATCACCGCGTACCGCTCACCAGGGGGAGCTGGCGTTCGT CCAGCCGCGTTTGCTCGTGATCTCCGTGAGCAGGACGCACTGGCAGTTACTGATACCACC CTGCAGCGTCGTCCAAAAAGTTGTCGAAATTGCGCCAGCACAGCATTTGGATCCAGAA GCGGGAACCGTGGAATTCTTGGTCGATGAAAAGGGCAACCACGTTTTCATCGAAATGAAC CCACGTATCCAGGTTGAGCACACCGTGACTGAAGAAGTCACCGGAGGTGGACCTGGTGAAG 1801 1012 1021 1141 1252 1201 1321 1432 1381 1492 1441 1552 1612 1561 1672 1621 1732 1681 1792 1741 781 892 841 901 961 1072 1132 1081 1192 1312 721 832 952 1261 1372 1501 1852 g & g & g ò qq В ò g à В ò g ò qq ò qq P & ò g ò g ò a g d g S B S ò 8 S ò ò

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ij 3171 3180 3240 3231 3291 3351 3300 3420 Kimura 3172 GCCAACGTCAACGGCCAGATCCGCCCAATGCGTGTGCGTGACCGCTCCGTTGAGTCTGTC Corynebacterium; thermophilic; amino acid biosynthesis; enzyme; thermotolerant; aceA; accBC; dtsR1; dtsR2; pfk; scrB; gluABCD; pdhA; pc; ppc; acn; icd; lpd; odhA; ds. 자. Nakamura Nakamatsu Corynebacterium thermoaminogenes pc nucleotide sequence.

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                                                                  The present sequence is provided in a specification relating to genes encoding thermophilic amino acid biosynthesis system enzymes of the thermotolerant bacterium Corynebacterium thermoaminogenes. The novel proteins retain at least 30% isocitrate ligase activity after hearing at 500C for 5 minutes. DNA fragments encoding the enzymes were isolated from a Corynebacterium thermoaminogenes chromosomal DNA plasmid library by PCR. The DNA may be used for developing strains of amino acid producing microorganisms.
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Best Local Similarity 78.7%; Pred. No. 0;

Matches 2734; Conservative 0; Mismatches 733; Indels 8; (
microbial production of
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                                         Page 126-132; 215pp; Japanese
and their DNA useful for
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Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:119
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990E-1031424.
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GAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAA GAAGGCTCACCAGTCAAGGCGTACCTGGACATCGATGAAATTATCGGTGCAGCTAAAAAA ACCGGTGATAAGTCTCGTGCGGTAACCGCCGCGAAGAAGGCTGGTCTGCCAGTTTTGGCG GAATCCACCCCGAGCAAAAACATCGATGACATCGTTAAAAGCGCTGAAGGCCAGACTTAC GAATCCACCCCGAGCAAAAACATCGATGAGATCGTTAAAAGCGCTGAAGGCCAGCAGACTTAC

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META1150 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAF713614 to AAB7 9633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors [11] for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a notaleoside, a nucleoside, a lipid, a saturated or unsaturated fatty a cid, a diol, a carbohydrate, an aromatic compound, a vitamin, a cid, a diol, a carbohydrate, an aromatic compound, a vitamin, a cid, a diol, a carbohydrate in a subject. (II), (II) or SMP proteins (II), in encoded by them are used for diagnosing the presence or activity of corynebacterium diphtheriae in a subject. (II), (II), (III) or host cells containing them are used to map genomes of capanisms related to c. glutamicum, identify and localise C. glutamicum sequences of interest, in evolutionary studies, in determining SMP protein regions required metabolism of sugars, and in modulating high-energy molecule production in modulating high-energy molecule production in a cell (i.e. ATP, NADPH) in modulating high-energy molecule production
                                                                                                                                                                                                                                                                                                                                                                                                                                             New isolated Corynebacterium glutamicum nucleic acid encoding a sugar metabolism and oxidative phosphorylation protein for production or modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes.
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99DE-1032180
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CCCATCTTTGTGAAGGCAGTTGCCGGTGGGGGGCGGACGCGGTATGCTTTGTTGTTGCTTCA

CCTGATGAGCTCCGCAAATTGGCAACAGAAGCATCTCGTGAAGCTGAAGCGGCATTCGGC

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Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:121.
                                                                                                                                                                                                                                                                                                                           SMP protein; sugar metabolism and oxidative phosphorylation protein; fine chemical production; organic acid; proteinogenic amino acid; nonproteinogenic amino acid; purine base; pyrimidine base; nucleoside; nucleoside; lipid; saturated fury acid; unsaturated fatty acid; diol; carbohydrate; aromatic compound; vitemin; cofactor; polyketide; enzyme; diagnosis; Corynebacterium diphtheriae; evolutionary study; ds.
                                                                                                                           CCACCTGCGGATGATGAGCAGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAAC 1500
                                                                                   1661 AAGGATCTGCCACTGCCACTGCCGTGACCG-CTGAAGCAGCTTGGCCCAGCCGCG 1719
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                                           AAGCCTCATGGTGTGCGTCCAAAGGATGTTGCAGCACCAATCGATAAGCTGCCCAACATC
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                               TTCACTTCCAAGCGCATCGCCACCGGATTTATCGGCGATCACCCCACCCTCCTTCAGGCT
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AAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79613 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors (II) for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nomproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty andicoside, a nucleotide, an aromatic compound, a vitamin, a cofactor, a polyketide, or an enzyme. The presence of (I) or SMP proteinogactor, a polyketide, or an enzyme. The presence of (I) or SMP proteins (III) encoded by them are used for diagnosing the presence or activity of corynebacterium diphtheriae in a subject. (I), (II), (III) or host cells containing them are used to map genomes of organisms related to containing them are used to map genomes of organisms related to in evolutionary studies, in determining SMP protein regions required for function, in modulating SMP protein activity, in modulating the metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH).
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98.0%; Pred. No. 0;
iive 0; Mismatches
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Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:115.

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AAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors (II) for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty
                                            Corynebacterium glutamicum; carbon metabolism and energy production; SMP Protein; ugar metabolism and oxidative phosphorylation protein; fine chemical production; organic acid; proteinogenic amino acid; purine base; pyrimidine base; nucleoside; nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; carbohydrate; aromatic compound; vitamin; cofactor; polyketide; diol; diagnosis; Corynebacterium diphtheriae; evolutionary study; ds.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 New isolated Corynebacterium glutamicum nucleic acid encoding a metabolism and oxidative phosphorylation protein for production modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes -
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acid, a diol, a carbohydrate, an aromatic compound, a vitamin, a polyketide, or an enzyme. The presence of (I) or SMP proteins (III) encoded by them are used for diagnosing the presence or activity of Corynebacterium diphtheriae in a subject. (I), (II), (III) or host cells containing them are used to map genomes of forganisms related to containing them are used to map genomes of forganisms related to in evolutionary studies, in determining SMP protein regions required in evolution, in modulating SMP protein activity, in modulating the metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH).
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Pred. No. 1.2e-268;
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Best Local Similarity 98.4%;
Matches 1062; Conservative 0
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Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:117
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03-SEP-1999;
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Haberhauer

Zelder O,

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New isolated Corynebacterium glutamicum nucleic acid encoding a sugar metabolism and oxidative phosphorylation protein for production or modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes
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                                                    Schroeder H,
                                                    В,
                                                 Kroeger
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(BADI ) BASF AG.
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MAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors [II] for expression in host cells and production or modulation of production of fine chemicals, such as an organic acid, a proteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside a nucleotide, a lipid, a saturated or unsaturated fatty a nucleoside, a nucleotide, a lipid, a saturated or unsaturated fatty a cid, a diol, a carbohydrate, an aromatic compound, a vitamin, a coffactor, a polyketide, or an enzyme. The presence of [I] or SMP proteins (III) encoded by them are used for diagnosing the presence or activity of corynebacterium diphtheriae in a subject. (II), (III) or host cells containing them are used to map genomes of organisms related to cortaining them are used to map genomes of organisms related to in evolutionary studies, in determining SMP protein regions required for for function, in modulating SMP protein regions required metabolism of sugars, and in modulating high-energy molecule production in a cell (i.e. ATP, NADPH).

Sequence 1083 BP; 211 A; 343 C; 300 G; 229 T; 0 other;

3 1716 1776 1896 1956 2016 2076 CTGAAGCAGCTTGGCCCAGCCGCGTTTGCTCGTGATCTCCGTGAGCAGGACGCACTGGCA 1656 1836 ATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAAAGCTCTACACCCTGGATTACTAC 2136 184 244 304 364 124 424 484 64 4; Gaps GTTACTGATACCACCTTCCGCGATGCACACCAGTCTTTGCTTTGCGACCCGAGTCCGCTCA TTCGCACTGAAGCCTGCGGCAGAGGCCGTCGCAAAGCTGACTCCTGAGCTTTTTGTCCGTG TTCGCACTGAAGCCTGCGGCAGAGGCCGTCGCAAAGCTGACTTCTTGTCCCTG GAGGCCTGGGGCGCGCGCGACCTACGATGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGG GGCCGCAACACCGTGGGATACACCCCGTACCCAGACTCCGTCTGCCGCGCGTTTGTTAAG GGCGGCAACACCGGGGGATACACCCCGTACCCAGACTCCGTCTGCCGCGCGTTTGTTAAG GAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCGACGCCTTAACGACGTCTCC GAGGCCTGGGGGGGGGGGCGTACGATGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGG GAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCC CAGATGCGTCCAGCAATCGACGCAGTCCTGGAGCCAACACCGCGGTAGCCGAGGTGGCT CAGATGCGTCCAGCAATCGACGCAGTCCTGGAGACCAACACCGCGGTAGCCGAGGTGGCT Ouery Match 29.4%; Score 1020.2; DB 22; Length 1083; Best Local Similarity 98.4%; Pred. No. 1.2e-268; Matches 1062; Conservative 0; Mismatches 13; Indels 4; C 1597 1717 1957 ഗ 65 125 185 1837 245 1897 305 365 2017 1657 1777 425 2077 g q g q ò ò ò ò g ò g ò g ò ò a ò

Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:111 Corynebacterium glutamicum; carbon metabolism and energy production; SMP protein; sugar metabolism and oxidative phosphorylation protein; fine chemical production; organic acid; proteinogenic amino acid; nonproteinogenic amino acid; purine base; pyrimidine base; nucleoside; nucleotide; lipid; saturated fatty acid; unsaturated fatty acid; carbohydrate; aromatic compound; vitamin; cofactor; polyketide; enzyme; diagnosis; Corynebacterium diphtheriae; evolutionary study; ds. 2375 2433 2493 844 CGCTTCGAGCTCATCGAAGACAACTACGC-AGCCGTTAATGAGATGCTGGGACGCCCAA 2671 CTAAAGATGGCAGAGGAGATCGTCAAGTCTGGCGCTCACATTCTGGCCATTAAGGATATG CTAAAGATGGCAGAGGAGATCGTCAAGTCTGGCGCTCACATCTTGGCCATTAAGGATATG GCTGCAGCTCAAGCTGCAGATGCTGTTGACGCTGCTTCCGGCACCACTGTCTGGCAC CACCTCCCA--GCCATCCCTGTCTGCCATTGTTGCTGCATTCGCGCACACCCGTCGCGAT CTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAACCGGTCGCGTCTACCGCCACGAA CTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAACCGGTCGGCGTCTACCGCCACGAA ATCCCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTGGGCCTTGCTGAT ATCCCAGGGGGACAGTIGTCCAACCTGCGGTGCACAGGCCACCGCACTGGGCCTTGCGGAT GATCTGCCAGTGCACGTGCACCCCACGACACTGCGGGGTGGCCAGTTGGCTACCTATT GATCTGCCAGTGCACGCCCACCCCACGCCCCGGCTGGCCCAGCTGCCAGCTTT GCTGCAGCTCAAGCTGGTGCAGATGCTGTTGACGGTGCTTCC-GCACCACTGTCTGGCAC CACCTCCCAAGCCATCCCTTGTCTGCCATTGTTGCTGCCATTCGCGCACACCCGTCGCGAT ACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGCCGTACTGGGAAGCTGTGCGCGGA GCTGGTCTGCTTCGCCCAGCTGCGGTAACCAAGCTGGTCACCGCCACTGCGCGCGTGAATTC BP. 2137 2257 2317 2434 2494 2554 1025 485 545 2197 605 665 725 785 845 908 965 2376 2614 RESULT 12 g g à В à g ò Dp ò qq ò g g ò ò ò ò

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metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79633 which are involved in carbon metabolism and oxidative phosphorylation (SMP) proteins given in AAB79243 to AAB 79633 which are involved in carbon metabolism and energy production. The C. glutamicum SMP gene can be used in vectors (II) for expression in host cells and production or modulation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside, a nucleoside, a lipid, a saturated or unsaturated fatty a cid, a diol, a carbohydrate, an armometic compound, a vitamin, a coid, a diol, a carbohydrate, an armometic compound, a vitamin, a cordactor, a polyketide, or an enzyme. The presence of (I) or SMP proteins (III) encoded by them are used for diagnosing the presence or activity of corrynebacterium diphtheriae in a subject. (I), (II), (II), or host cells containing them are used to map genomes of organisms related to containing them are used to map genomes of organisms related to containing them are used to map genomes of organisms related to containing them are used to map genomes of organisms related to containing the metabolism of sugars, and in modulating high-energy molecule production a cell (i.e. ATP, NADPH).
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Pred. No. 3.9e-231;
0; Mismatches 15; Indels 1
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Matches 903; Conservative
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P-PSDB; AAB79298.
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Corynebacterium glutamicum SMP protein nucleotide sequence SEQ ID NO:1113
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New isolated Corynebacterium glutamicum nucleic acid encoding a sugar metabolism and oxidative phosphorylation protein for production or modulation of production of fine chemicals e.g. amino acids, carbohydrates or enzymes. WPI; 2001-061975/07. P-PSDB; AAB79299.

Claim 3; Page 308-310; 1246pp; English.

MAF71360 to AAF71750 encode the Corynebacterium glutamicum sugar metabolism and oxidative phosphorylation (SMP) proteins given in AAF71350 encode the involved in carbon metabolism and benety production or medilation of production of fine chemicals, such as, an organic acid, a proteinogenic or nonproteinogenic amino acid (preferred), a purine or pyrimidine base, a nucleoside a nucleotide, a lipid, a seturated or unsaturated fatty a cid, a diol, a carbohydrate, an arcomatic compound, a vitamin, a cid, a diol, a carbohydrate, an arcomatic compound, a vitamin, a coffactorium diphtheriae in a subject. (II), (III) or SMP proteins (III) or correction medical production and localise C. glutamicum sequences of interest, in evolutionary studies, in determining SMP protein regions required for metabolism of sugars, and in modulating high-energy molecule production in modulating high-energy molecule production in a cell (i.e. ATP, NADPH).

939 BP; 202 A; 283 C; 261 G; 193 T; 0 other; Sequence

3335 3395 3095 3215 TTGGAGCTCATCGAAGACAACTACGC-AGCCGTTAATGAGATGCTGGGACGCCCAACCAA 2675 2795 2855 3035 780 840 CCAGGCGGACAGTTGTCCAACCTGCGTGCACAGGCCACCGCACTGGGCCTTGCTGATCGC 2616 480 1; Gaps CCAGGCGGACACTTGTCCAACCTGCGTGCACAGGCCACCGCACTGGGGCTTGCGGATCGT 60 CGCACTGGAAGGCCGCTCCGAAGGCAAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCA CCCGAAGCCAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGCAACACCTCTGCGCT CCCGAAGCCAACCGAAGAGTTCCTCGAGCACCGTCGCCGCTTCGGCAACACCTTGGCGCT GGATGATCGTGAATTCTTCTACGGACTGGTCGAGGCCGCGGAGACTTTGATCCGCCTGCC AGATGTGCGCACCCCACTGCTTGTTCGCCTGGATGCGATCTCTGAGCCAGACGATAAAGGG TATGCGCAATGTTGTGGCCAACGTCAACGCCCAGATCCGCCCCAATGCGTGTGCGTGACCG CTCCGTTGAGTCTGTCACCGCAACCGCAGAAAAGGCAGATTCCTCCCAACAAGGGCCATGT TECTECACCATTCGCTGTGTTGTCACTGTGACTGTTGCTGAAGGTGATGAGGTCAAGGC TGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCTTCTGT TGGAGATGCAGTCGCAATCATCGAGGCTATGAAGATGGAAGCAACAATCACTGCTTCTGT TGACGGCAAGATTGAACGCGTTGTGGTTCCTGCTGCAACGAAGGTGGAAGGTGGCGACTT GGCGCACCTCGACGCTGATTCCAAGGAACGTCGCAACAGCCTCAACCGCCTGCTGTT Length 939; Indels Score 883; DB 22; Pred. No. 3.9e-231; 0; Mismatches 15; RESULT 14 ABK63659 ID ABK63659 standard; CDNA; 3945 BP. GATCGTCGTCGTTTCCTAA 3474 GATCGTCGTCGTTTCCTAA 919 25.4%; Query Match 25.4 Best Local Similarity 98.3 Matches 903; Conservative 661 781 3276 721 3396 3456 3096 3156 3336 901 ٦ 2617 181 2856 2916 2976 3036 541 3216 61 121 2736 241 301 361 421 481 2557 2676 2796 q Д ò g ò Op à g ò Dp ò g & g ò QQ δ g ò g ò g à QQ à g δ ò

Length 3945;

Score 681; DB 24; Pred. No. 1.6e-175;

19.6%; 54.2%;

Similarity

Apr

Wed

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sequence differentially expressed in response to a hepatotoxin #1566.
                                                                         Rat; ss; hepatotoxin; expressed sequence tag; EST; drug screening; differential expression; centrilobular necrosis; steatosis.
                                                                                                                                                                                                                                                                                                      2000US-244880P.
2001US-290029P.
2001US-290645P.
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2001US-298884P.
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 (first entry)
                                                                                                                                  Rattus norvegicus
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13-JUN-2001;
19-JUN-2001;
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18-JUN-2002
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                                                                                                                                                                                                           07-FEB-2002
                                       Rat
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Predicting toxic effects of compounds or the progression of these toxic effects by determining the changes in gene expression in tissues or cells exposed to the toxin and comparing these to gene expression in unexposed tissues or cells. WPI; 2002-241625/29.

Elashoff MR;

Castle AL,

Johnson KR,

Porter MW, LOGIC INC

Mendrick D,

GENE

(GENE-)

Claim 1; Seq ID No 1566; 239pp; English.

The invention relates to methods for predicting toxic effects of compounds or the progression of these toxic effects by determining the compounds or the progression in tissues or cells exposed to the toxic contain and comparing these to gene expression in unexposed tissues or cells. Also included are methods of predicting at least one toxic cfeet of a compound or progression of a toxic effect, preferably the hepatotoxicity of a compound, comprising detecting the level of expression in a tissue or cell sample exposed to the compound of two or care genes listed in the specification, where differential expression of the genes is indicative of at least one toxic effect or progression.

The method can also be used to identify an agent which modulates the toxic response and predict cellular pathways that a compound modulates in a cell. The methods utilise a set of at least two probes (on a solid support in kit form), where each of the probes comprises a sequence that specifically hybridises to a gene listed in the specification, a computer of system comprising a database containing information identifying the expression level in a tissue or cell sample exposed to a hepatotoxin of a cet of genes comprising at least two genes listed in the specification, and a user interface to view the information used to present information identifying the expression and for identifying toxicity markers in the specification. The method is useful for elucidating global changes in gene expression and for identifying toxicity markers in toxicity markers in the present markers in the present mand for identifying toxicity markers in the present mand to make and the propes of the pr toxicity markers in drug screening and toxicity assays. The genes and gene expression information may be used as diagnostic markers for the prediction or identification of the physiological state of tissue or cell sample that has been exposed to a compound or agent. Hepatotoxicity lis characterized by centrilobular necrosis and steatosis. The present sequence is an expressed sequence tag (BST) or CDNA derived from a genewhich is differentially expressed in response to a hepatotoxic agent.

Sequence 3945 BP; 883 A; 1108 C; 1127 G; 827 T; 0 other;

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1043
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                                                                                   TCAAAAAGATCTTGGTAGCAAACCGCGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCAC
                                                                                                                           144 TCAAGAAAGTAATGGTGGCCAACAGAGGTGAGATTGCCATCCGAGTGTTTCGTGCCTGCA
                                                                                                                                                                                                                                                                                              Gecagaaagcrigarigaagccraccrrarrigeccgrigegcreecrccrereragecaagccracc
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 444 GATTCATTGGTCCAAGCCCAGAGGTGGTCCGCAAGATGGGAGACAAAGGTGGAAAGCCCGGG
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                                                                                                                                                                   146 TCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGATCATTCCACC
                                                                                                                                                                                                               204 CAGAGCTGGGTATCCGCACAGTGGCTGTCTACTCGGAGCAGGACACAGGCCAGATGCACC
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                                         0; Mismatches 1260;
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Query Match
Best Local Simi
Matches 1521;
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GCATCACCACGGAAGATCCAAACAACAGCTTCCGCCCAGATACCGGAACTATCACCGCGT 1162	139 145 145 152 151 151 158	CCGTCAÁGHTCAGTCCCAGCCCTTGGGCCCATTGTTCTGTGGTGCCCATAGGCCCA 1643 TGCGCAGCTTCCCGTGACCCTGGAGCGCTTGGCCCAGCCGGTTTGCTCGTGTT 1633 TGCCCAGCTTGCTGGAGAGAGCGCTTGGCCAGCGGTTTGCTGGTGT 1533 CCCCAGCTGGTTTCAGAGACATCCTTCTGCAGAGGCCAAGGCTTTGCCAGAGCTG 1703 TCCGTGAGCAGGACGCACTGGCAGTTACTGATACCACTTCCGCGATGCACACACA		TCGACGCGCTTAACGACGCTCCCCAGATGCGTCCAGCAGTCCTGGAGACCA 2053 TTGACTCCTTAACGACGCCAAACATGCTGCTGGCGCATCGTGCTGTGTGTG
1103 G 1164 G 1163 A 1224 T 1220 A 1284 T 1380 A		1584 C 1574 T 1644 C 1634 T 1704 T 1694 T	1754 T 1824 P 1814 G 1884 G 1874 T 1944 T 1934 C	2064 1 2054 <i>p</i> 2054 <i>p</i> 2121 0 2114 <i>p</i> 2181 0
8 6 8 6 8 6	6 6 6 6 6 6 6	8 6 8 6 8 6 8		6 6 6 6 6 6

Gene; liver cancer; ds; hepatocellular carcinoma; hepatotropic; metastatic liver tumour; cytostatic; expression profile; disease state; disease progression; drug toxicity; drug efficacy; drug metabolism. 2645 CCGTITAATGAGATGCTGGGACGCCCAACCAACGTCCCCCATCCTCCAAGGTTCTTGGCG 2704
2721 AGGCTAACCAGATGCTGGGGGACCTCATCAAGGTGACACCATCCTCCCAAGATTGTGGGGG 2780 2781 ATCTGGCCCAGTTCATGGTGCAGAACGGGTTGAGCCGGGCAGAGGCAGAAGCTCAGGCAG 2840 2301 TCAGCTCCCTCCGGAACCGGTTCCCCGACCTCCCACTGCCATACCCATACCCATAGACAT 2360 2601 CTGGCAACTCAGACGTGTATGAGAATGAGGATCCAGGGGGCCAGTACACCAACCTACACT 2660 2661 TCCAGGCCCACAGCATGGGACTTGGCTCCAAGTTCAAGGAGGTCAAGAAGGCCTATGTGG 2720 2234 TCACCGCACTGCG---CCGTGAATTCGATCTGCCAGTGCACGTGCACACACCCACGACACTG 2290 ceserescentrescraceracerecaserecaseres de 1350 2351 GIGCTICCGCACCACTGTCTGGCACCACCTCCCAGCCATCCCTGTCTGCCATTGTTGCTG 2410 2421 regeracrearetraretreregargacereadececageargagecer 2480 CATTCGCGCACACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGC 2470 2525 GCCCAACCGGTCGCGTCTACCGCCACGAAATCCCCAGGCGGACAGTTGTCCAACCTGCGTG 2584 2585 CACAGGCCACCGCACTGGGCCTTGCTGATCGCTTCGAGCTCGAAGACAACTACGCAG 2644 ACCTCGCACTCCACCTGGTTGGTGCGGGTGTAGATCCAGCAGACTTTGCTGCAGACCCAC 2764 2901 ATGGGGGTTTCCCTGAACCCTTCCGTTCTAAGGTGCTAAAGGACC 2945 2825 CAGGTGGCTGCCAGAACCACTGCGCACCGCGCACTGGAAGGCC 2869) Gene #3030 used to diagnose liver cancer. ABN96532 standard; DNA; 4017 BP. 02-OCT-2000; 2000US-237054P. 02-OCT-2001; 2001WO-US30589 13-AUG-2002 (first entry) (GENE-) GENE LOGIC INC WO200229103-A2 Homo sapiens. 11-APR-2002. ABN96532; 2705 2241 2291 2411 2481 à qq ò qq 6 6 6 6 6 6 g ð qq ò g ò ΩD ò qq ò Пр

The invention relates to a novel method for diagnosing and detecting the progression of liver cancer, hepatocellular carcinoma or metastatic liver tunmour in a patient, and differentiating metastatic liver cancer from hepatocellular carcinoma in a patient, involving detecting the level of expression of two or more genes represented in ABN9503-ABN9485 in a tissue sample. The method of the invention has hepatotropic, and ortocratic activity. The method is useful for diagnosing and detecting the progression of liver cancer, hepatocellular carcinoma and metastatic liver carcinoma in a patient. The method is useful for identifying expression profiles which serve as useful diagnostic markers as well as markers that can be used to monitor disease states, disease progression, drug fefficacy and drug metabolism.

Note: The sequence data for this patent did not form part of the printed procinity, but was obtained in electronic format directly from WIPO nepatocellular carcinoma or metastatic liver tumor in a patient, involves detecting the level of expression of two or more genes in a Diagnosing and detecting the progression of liver cancer, ģ Vockley Claim 1; SEQ ID NO 3030; 298pp; English. Ś Peres-Da-Silva ú WPI; 2002-426119/45 liver tissue sample à Horne

Sequence 4017 BP; 825 A; 1238 C; 1235 G; 719 T; 0 other; 19.4%; 54.3%; Query Match

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Sequence 9519, Ap Sequence 9266, Ap Sequence 3440, Ap Sequence 7224, Ap Sequence 7461, Ap Sequence 1481, App Sequence 59, Appl Sequence 18, Appl Sequence 16, Appl Sequence 16, Appl Sequence 451, App Sequence 451, App Sequence 4163, App Sequence 4163, App Sequence 1136, App Sequence 1108, App Seque

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US-09-974-973-1

Sequence 1, Application US/09974973

Sequence 1, Application US/09974973

Sequence 1, Application US/09974973

Sequence 1, Application US/09974973

GENERAL INFORMATION: Feedback-Resistant Pyruvate Carboxylase Gene from Corynebacter; US-17TLE OF INVENTION: Feedback-Resistant Pyruvate Carboxylase Gene from Corynebacter; US-17TLE OF INVENTION NUMBER: US/09/974,973

CURRENT FILING DATE: 2001-10-21

PRIOR APPLICATION NUMBER: US 60/239,913

PRIOR APPLICATION OF SEQ 10 NOS: 19

NUMBER OF SEQ ID NOS: 19

SOFTWARE: Patentin version 3.0
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Publication No. US20030027305A1
GENERAL INFORMATION:
APPLICANT: Sinskey, Anthony J.
APPLICANT: Willis, Laura B.
TITLE OF INVENTION: Pyruvate Carboxylase from Corynebacterium glutamicum
FILE REFERENCE: 1533.0790002
CURRENT FILING DATE: 2002-01-15
PRIOR PELICATION NUMBER: US/10/045,072
CURRENT FILING DATE: 2000-10-03
PRIOR FILING DATE: 2000-10-03
PRIOR FILING DATE: 1998-12-23
NUMBER OF SEQ ID NOS: 39
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO.
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Best Local Similarity 98.6
Matches 3427; Conservative
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2400 2460 2520 2667 2727 2787 2847 GGCGACCTCGCACTCCACCTGGTTGGTGCGGGTGTAGATCCAGCAGACTTTGCTGCAGAC 2760 2820 2967 2880 3027 2940 3000 3147 3120 3180 3327 AACGGCCAGATCCGCCCAATGCGTGACCGCTCCGTTGAGTCTGTCACCGCAACC 3240 ACCGTGACTGTTGCTGAAGGTGATGAGGTCAAGGCTGGAGATGCAGTCGCAATCATCGAG 3360 2607 2580 CCTCCAGGTGGCTGGCCAGAGCCACTGCGCACCCGCGCACTGGAAGGCCGCTCCGAAGGC AAGGAACGTCGCAACAGCCTCGCTGCTGCTCCCGAAGCCAACCGAAGAGTTCCTC CCACAAAAGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAAC CCTCCAGGTGGCCAGAACCACTGCGCACCGCGCACTGGAAGGCCGCTCCGAAGGC 2281 CACGACACTGCGGGTCGCCAGTTGGCTACCTATTGCTGCTGCAGCTGGTGCAGAT
2428 CACGACACTGCGGGTGGCCAGCTGGCAACCTACTTTGCTGCAGCTCAAGCTGGTGCAGAT GACCTCGAGCCGTACTGGGAAGCAGTGCGGGGACTGTACCTGCCATTTGAGTCTGGAACC CCAGGCCCAACCGGTCTACCGCCACGAATCCCAGGCGGACAGTTGTCCAACCTG AAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCAGCGCCACCTCGACGCTGATGATTCC ATTGTTGCTGCATTCGCGCACACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCT GACCTCGAGCCGTACTGGGAAGCTGTGCGCGGACTGTACCTGCCATTTGAGTCTGGAACC 2401 2548 2608 2668 2728 2788 2701 2848 2761 2908 2821 2968 2881 3028 2941 3088 3001 3148 3061 3208 3121 3268 3181 3328 3241 3388 3301 3448 2461 2521 2581 2641 S S S S a a y a \$ A 8 Dp ò g ò qq ò g g g à ò В ò Q

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                         421 GTTTTGGGGGAATCCACCCCGAGCAAAAAATGGATGAATGGTTAAAAGGGCTGAAGGC
                                                                            GTTGCTTCACCTGATGAGCTTCGCAAATTAGCAACAAGAAGCATCTCGTGAAGCTGAAGCG
                                                                                                                                                             GCATTCGGCGACGGTTCGGTATATGTCGAACGTGCTGTGATTAACCCCCAGCACATTGAA
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                                                Query Match 96.3%; Score 3344.8; DB 9; Length 3420; Best Local Similarity 98.6%; Pred. No. 0; Matches 3373; Conservative 0; Mismatches 47; Indels 0;
                                                                                                                              ORGANISM: Corynebacterium glutamicum US-09-738-626-765
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            Length 3945;
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19.6%; Score 681; DB 10; Length 3
Best Local Similarity 54.2%; Pred. No. 1.3e-200;
Matches 1521; Conservative 0; Mismatches 1260; Indels
PRIOR APPLICATION NUMBER: US 60/222,880
PRIOR FILING DATE: 2000-11-02
PRIOR FILING DATE: 2000-11-02
PRIOR FILING DATE: 2001-05-11
PRIOR PELLING DATE: 2001-05-11
PRIOR APPLICATION NUMBER: US 60/290,645
PRIOR APPLICATION NUMBER: US 60/292,336
PRIOR FILING DATE: 2001-05-22
PRIOR PELLING DATE: 2001-06-06
PRIOR PELLING DATE: 2001-06-06
PRIOR APPLICATION NUMBER: US 60/295,798
PRIOR PILING DATE: 2001-06-06
PRIOR PELLING DATE: 2001-06-06
PRIOR PILING DATE: 2001-06-19
PRIOR FILING DATE: 2001-06-19
PRIOR FILING DATE: 2001-06-19
PRIOR FILING DATE: 2001-07-09
NUMBER OF SEQ ID NOS: 1740
SOFTWARE: PARCHIN VORTE: 2011-07-09
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SOFTWARE: PARCHIN VORTE: 2011-07-09
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 ; OTHER INFORMATION: Genbank Accession No. US20020142981A1 S72370 US-09-880-107-3029
                                                patent No. USCO020142981A1

GENERAL INFORMATION:

APPLICANT: Horne, Darci T.

APPLICANT: Generf, Uwe

TITLE OF INVENTION:

FILE REFRENCE: 44921-5028 WO

CURRENT FILING DATE: 2001-06-14

PRIOR PLING DATE: 2000-06-14

PRIOR PLING DATE: 2000-06-14

PRIOR PLING DATE: 2000-10-02

NUMBER OF SEQ ID NOS: 3950

SOFTWARE PATENTED AUGUST SEQUENCE

FILENGTH: 4017
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3029, Application US/09880107
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ORGANISM: Homo sapiens
FEATURE:
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qq	792 AGTTCATCGAGAAGCCACGGCACATCGAGGTGCAGATCTTGGGGGACCAGTATGGGAACA	GGACCAGTATGGGAACA 851	ë	
ò	743 TIGTACACCITITATGAACGTGACTGCTCACTGCAGCGTCGTCACCAAAAAGTTGT	CCAAAAAGTTGTCGAAA 802	ò	
qq	852		වූ	-
ò	803	TTGTGCGGATGCAGTAA 862	ò	1874 TAA
q	912	CACCAGCGACTCTGTGA 971	qq	-
ઠે	863	ATTCTTGGTCGATGAAA 922	ò	1934 CCG1
: 셤			qq	2052 ACG1
ò	923	TGAGCACACCGTGACTG 982	ò	1994 TCGF
g	-		OD	2112 TTG
δ	983		δ	2054 ACAC
a	-		g	2169 CCGC
ò	1043		ò	2114 AGCT
q			අු	
ò	1103 GCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGCGT	CGGAACTATCACCGCGT 1162	ò	2174 ACAT
a	1212		q	2289 ACAT
ઠે	1163	AGCTCAGCTCGGTGGCG 1219	ò	2234 TCAC
g	1272		අ	-
ò	1220	CCGTGGTTCCGACTTTG 1279	ò	2291 CGG
q			අු	2409 CAG
8	1280		ò	2351 GTGC
· 8			qq	2469 TGG
ò	1340		ò	2411 CATT
g	1452		QQ	2529 GTAC
ò	1400		ò	2471 CGTP
음			д	2589 AGTA
ò	1460		ò	2531 CCGC
e d			Ор	2649 CTGC
ò	1516 CGTCCAAAGGATGTTGCAGCACCAATCGATAAGCTGCCCAACATCAAGGATCTGCCACTG	FCAAGGATCTGCCACTG 1575	à	2585 CACA
g	1632		qq	
ò	1576 CCACGCGGTTCCCCGTCACCGCCTGAAGCAGCCTTGGCCCAGCCGCGTTTGCTCGTCATC	cecerriecresare 1633	ò	
g	1692		අු	
ò	1634 recerende de la recentación del recentación de la recentación de la recentación de la recentación de la recentación de la recentación de la recentación de la recentación de la recentación de la recentación de la recentación	CGATGCACACCAGTCTT 1693	ò	
셤	1752		셤	
ઠે	1694 IGCTIGGGACCGGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAGGCCGTCGCAAAGC	AGAGGCCGTCGCAAAGC 1753	ð t	
g	1812 IGCTGGCCACTCGTGTGCGCACCCACGATCTCAAAAAGATCGCCCCCTATGTTGCCCACA	CCCTATGTTGCCCACA 1871	3 3	10 10 10 10 10 10 10 10 10 10 10 10 10 1
ò	1754 IGACTCCTGAGCTTTTGTCCGTGGAGGCCTGGGGGGGCGCGACCTACGATGTGGCGATGC	TIACGATGTGGCGATGC 1813	÷ 5	2949 ATGG
QQ	1872 ACTTCAGCAAGCTCTTCAGCATGGAGAACTGGGGGAGGAGCCACC	strtáacátcácátác 1931	1	

2173 2288 2348 2290 2350 2410 ANGEGETTAACGACGTCTCCCAGATGCGTCCAGCAATCGACGCAGTCCTGGAGACCA 2053 2113 2228 2233 2468 2111 CAGCTGATTCCATGTCTGGGATGACTTCACAGCCCAGCATGGGGGCCCTGGTGGCCT 2528 ACTGGGAAGCTGTGCGCGCACTGTACCTGCCATTTGAGTCTGGAACCCCAGGCCCAA 2530 2648 2708 TCGCGCACACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGTTTCTGACCTCGAGC 2470 2644 2768 2704 2828 2888 rectetitica gga tecenegea ca geereca a ceneca ca a ca a 1873 G-----TCGCGTCTACCGCCACGAAATCCCAGGCGGACAGTTGTCCAACCTGCGTG 2584 TCGCACTCCACCTGGTTGGTGCGGGTGTAGATCCAGCAGACTTTGCTGCAGACCCAC 2764 CCGCACTGCG---CCGTGAATTCGATCTGCCAGTGCACGTGCACACCCACGACACTG CTTCCGCACCACTGTCTGGCACCACCTCCCAGCCATCCCTGTCTGCTG AGGCCACCGCACTGGGCCTTGCTGATCGCTTCGAGCTCCATCGAAGACAACTACGCAG CCGCGCTAGCCCAAGGTGGCTATGGCTTATTCTGGTGATCTCTCTGATCCAAATGAAA TCCTGTGCATCAAGGACATGGCCGGGCTGCTGAAGCCCACGGCCTGCACGATGCTGG ccagaggacrecergacacacagagreceargaaggegegegegergerge <u> Aggicica caga artiga gentra a granda a gara a gangana </u> TTAATGAGATGCTGGGACGCCCAACCAAGGTCACCCCATCCTCCAAGGTTGTTGGCG ccaaccagargeregegarerearcaaggreacecereerecaagaregege redeceagritares de casa a resea resea esta de aseces estas es AGTACGACATCCCAGACTCTGTCATCGCGTTCCTGCGCGGCGAGCTTGGTAACCCTC ACATTCAGATGCTGCCTTCGCGGCCGCAACACCGTGGGATACACCCCGTACCCAGACT TCTGCCGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGACATCTTCCGCCATCT TTCTGGCCATTAAGGATATGGCTGGTCTGCTTCGCCCCAGCTGCGGTAACCAAGCTGG STGGCTGGCCAGAACCACTGCGCACCGCGCACTGGAAGGCC 2869

GGGGTTTCCCCGAACCCTTTCGCTCTAAGGTACTGAAGGACC 2993

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Arcgrogcaaraaacgargaaaracarrdcagaagraacgcrcaarcgcrrccrfdgca 1438
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49.0%; Pred. No. 2.7e-145;
ive 0; Mismatches 1672; Indels 51;
                                                                                    patent No. US20020061659A1

GENERAL INFORMATION:
APPLICANT: Haselbeck, Robert
APPLICANT: Haselbeck, Robert
APPLICANT: Haselbeck, Robert
APPLICANT: APPLICANT: Obleson, Kari L.
APPLICANT: APPLICANT: Azi, Judith W.
APPLICANT: Trawick, John D.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Wu, H. Howard
ITILE OF INVENTION: Dentification of Essential Genes in
ITILE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITRA.011A
ITILE OF INVENTION: Prokaryotes
FILE REPERENCE: ELITRA.011A
ITILE OF INVENTION: Prokaryotes
FILE REPERENCE: ELITRA.011A
FILE OF INVENTION: PROMER: 60/20412,078
FRIOR PLILING DATE: 2000-03-21
FRIOR PLILING DATE: 2000-05-23
FRIOR PLILING DATE: 2000-12-23
FRIOR PLILORION NUMBER: 60/254,031
FRIOR PLILING DATE: 2000-12-23
FRIOR PLILING DATE: 2000-12-22
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FRIOR PLILORION NUMBER: 60/254,931
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FRIOR PLILING DATE: 2000-12-22
FRIOR PLILING DATE: 2000-12-22
FRIOR PLILING DATE: 2000-10-22
                                                                          6709, Application US/09815242 . . . US20020061569A1
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Best Local Similarity 49.0°
Matches 1657; Conservative
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; LOCATION: (1)...(3429)
US-09-815-242-6709
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                                                        CAGAÀAAAGTGATCACAGCTAAAAATATTCTAGACGCTCAAGGAGCAACCGCCGTCATCG 1558
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                                                                                                            ATTGGGTTAAGAATCAAGAAAGTGTGATAATGACAGATACCACGTTCCGTGATGCGCACC
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RESULT 8

US-08-781-986A-324/C

US-08-781-986A-324, Application US/08781986A

Sequence 324, Application US/08781986A

Publication No. US20030054436A1

GENERAL INFORMATION:

APPLICATION: Staphylococcus aureus Polynucleotides and Sequences

NUMBER OF SEQUENCES: 5255

CORRESPONDENCE ADDRESS:
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STREET: 9410 Key West Avenue CITY: Rockville STATE: Maryland COUWIRY: USA ZIP: 20850
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COMPUTER READABLE FORM:
MEDIUM TYPE: Diskette, 3.50 inch, 1.4Mb storage COMPUTER: HP Vectra 486/33
OPERATING SYSTEM: MSDOS version 6.2
SOFTWARE: ASCIT Text
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/781,986A
FILING DATE:
APPLICATION TOWNER: APPLICATION TOWNER: APPLICATION NUMBER: ATPLICATION NUMB
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 Score 488.4; DB 7;
Pred. No. 1e-140;
0; Mismatches 1711;
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                                                                                                                                                                                                                                                                                     NAME: Benson, Bob
REGISTRATION NUMBER: 30,446
REPRENCE/DOCKET NUMBER: PB246
TELECOMUNICATION INFORMATION:
TELEPHONE: (301) 309-8504
TELEFAX: (301) 309-8512
INFORMATION FOR SEQ ID NO: 324:
SEQUENCE CHARACTERISTICS:
LENGTH: 539 base pairs
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Similarity 48.5%;
55; Conservative 0
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TOPOLOGY:
US-08-781-986A-324
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Matches 1665;
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                                        ATTTGATGTGGCATATAATTTCTTGAAGGAAAACCCATGGGAACGACTTGAACGTCTACG
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                                                                                                                                       CACCCCGTACCCAGACTCCGTCTGCCGCGGTTTGTTAAGGAAGCTGCCAGCTCCGGCGT
                                                                                                                                                                                                  GGACATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGCAATCGA
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             CTACGATGTGGCGATGCGTTTCCTTTTGAGGATCCGTGGGACAGGCTCGACGAGCTGCG
                                                                         CGAGGCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGTGGGATA
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Steven Batash
TITLE OF INVENTION: Enterococcus faecialis Polynucleotides and Polypeptides
NUMBER OF SEQUENCES: 982
CORRESPONDENCE ADDRESS:
ADDRESSEE: Human Genome Sciences, Inc.
STREET: 940 West Avenue
CITY: Rockville
STATE: Maryland
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2877 AGGCAAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCAGGCGCACCTCGACGCTGATGA 2936
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COMPUTER READABLE FORM:

MEDIUM TYPE: Diskette, 3.50 inch, 1.4Mb stc

COMPUTER: HP Vectra 486/33

OPERATING SYSTEM: MSDOS version 6.2

SOFTWARE: ASCII Text

CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/09/070,927A

FILING DATE: 04-May-2000

CLASSIFICATION: <UNKNOWN>
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APPLICATION NUMBER: 60/046,655
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Sequence 80, Application US/09070927A
GENERAL INFORMATION
HEADLICANT: Charles A. Kunsch
Patrick J. Dillon
                                                                                                                    2937 TTCCAAGGAACGTCGCAACAGCC--
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US-09-070-927A-89/c
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us-09-974-973-1.rnpb

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                                                                                                                                                                                                                                                                                                                                                     Length 20072
                                                                                                                                                                                                                                                                                                                                                                                     Indels
                                                                                                                                                                                                                                                                                                                                                       DB 10;
                                                                                                                                                                                                                                                                                                                                                   Score 488.2; DB 10;
Pred. No. 2.5e-140;
0; Mismatches 1358;
PILING DATE: 1997-05-16
APPLICATION NUMBER: 60/044,031
FILING DATE: 1997-05-06
APPLICATION NUMBER: 60/066,009
FILING DATE: 1997-11-14
ATTORNEY/AGBWT INPORMATION:
NAME: Kenley K. Hoover
REGISTRATION NUMBER: 40,302
REFERENCE/DOCKET NUMBER: PB369
TELEPRAY: (301) 309-8512
INFORMATION FOR SEQ 10 NO: 89:
SEQUENCE CHARACTERISTICS:
LENGTH: 20072 base pairs
TYPE: nucleic acid
STRANDEDINESS: double
                                                                                                                                                                                                                                                                                                     89:
                                                                                                                                                                                                                                                                                        ; TOPOLOGY: linear
; SEQUENCE DESCRIPTION: SEQ ID NO:
US-09-070-927A-89
                                                                                                                                                                                                                                                                                                                                                     Query Match
Best Local Similarity 50.3%;
Matches 1398; Conservative (
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Sequence 4413, Application US/09815242 Patent No. US20020061569A1 GENERAL INFORMATION:

RESULT 10 US-09-815-242-4413

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66 AGCAGAATTAGACATCAGCACAGTTGCAATTTATTCGAATGAAGACAAAAGTTCATTACA 125
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14.0%; Score 486.8; DB 10;
Best Local Similarity 48.4%; Pred. No. 2.5e-140;
Matches 1664; Conservative 0; Mismatches 1712;
                                                                                                                                                                                                                                                                                                                                                                                                         Essential
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari L.
APPLICANT: 2yskind, Judith W.
APPLICANT: 2yskind, Judith W.
APPLICANT: 2yskind, Judith W.
APPLICANT: Trawick, John D.
APPLICANT: Trawick, John D.
APPLICANT: Garn J.
APPLICANT: Carr, Grant J.
APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Identification of Essenti
TITLE OF INVENTION: Identification of Essenti
TITLE OF INVENTION: 1001-101/2018
FILE REFERENCE: ELITRA.011A
TITLE OF INVENTION: 1001-03-21
FRICH APPLICATION NUMBER: 60/191,078
FRICH APPLICATION NUMBER: 60/206,848
FRICH APPLICATION NUMBER: 60/206,848
FRICH APPLICATION NUMBER: 60/206,848
FRICH APPLICATION NUMBER: 60/206,848
FRICH APPLICATION NUMBER: 60/206,848
FRICH APPLICATION NUMBER: 60/206,938
FRICH APPLICATION NUMBER: 60/253,625
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FRICH APPLICATION NUMBER: 60/253,931
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FRICH APPLICATION NUMBER: 60/253,931
FRICH APPLICATION NUMBER: 60/253,93
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AAGTGGTGGCGGCGGTAAAGGTATGAGAATCGTTCGTGAAGAAAGTGAATTAGAAGATGC GGCAACAGAAGCATCTCGTGAAGCTGAAGCGGCATTCGGCGACGGTTCGGTATATGTCGA	AAAGTTCTGCCGCTCCATTGGTTACCAGGGGGGGAAACCGTGGAATTCTTGGTCGATGA TCATTGATTGATGGATTAAATAGTCAATGGTACTTTGTTTG	TATCACGGGTACCGCTACCAGGGGGGCGTTCGTCTTGACGGTGCAGCTAGCT	GGATGATGAGGAGGACGCATCCTGGATTACTTGGCAGATGTCACCGTGAACAAGCCTCA
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486 621 546 681 606 741 741 666 801	961 786 921 845 981 903 1041 1092	1152 1083 1212 1143 1269 1203 1329 1323	1449 1383 1509 1443 1557 1560 1617
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2579 2696 2756 2219 2399 2516 2519 2699 2337 AGATGCTGTTGACGGTGCTTCCGCACCACTGTCTGGCACCACCTCCCAGCCATCCCTGTC 2396 2280 CGATATCATTGATACTGCTGTTGCTTCAATGAGTGGTTTAACAAGTCAGCCAAGCGCCAA 2339 GGAGTCACTTAGTCATTATTGGTCAACTGTACGTACTTATTATTCAGACTTTGAAAGTGA 2459 2517 AACCCCAGGCCCAACCGGTCTACCGCCACGAAATCCCAGGCGGACAGTTGTCCAA 2576 CGTCAAGTCTGGCGCTCACATTCTGGCCATTAAGGATATGGCTGGTCTGCTTCGCCCAGC 2216 1919 2039 CGATGCACACCAGTCTTTGCTTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGC 1736 CTACGATGTGGCGATGCGTTTCCTCTTTGAGGATCCGTGGGACAGGCTCGACGAGCTGCG 1856 2697 TGTTGGCGACTCGCACTGGTTGGTGCGGGTGTAGATCCAGCAGACTTTGCTGC 2457 ITCTGACCTCGAGCCGTACTGGGAAGCTGTGCGCGGACTGTACCTGCCATTTGAGTCTGG 2520 TITAAGTCAACAAGCTAAAAGTTTAGGTTTAGGCGAAAGATTGGAGTGAAGGATAT 2637 CTACGCAGCCGTTAATGAGATGCTGGGACGCCCAACCAAGGTCACCCCATCCTCCAAGGT 2640 AGTTGGTGATATGGCACTTTATATGGTACAAATGATCTTGATGAACAATCCGTGATTAC 2340 TICGTIATATIATGCATIAAATGGCTICCCACGTCACCTTAGAACTGATATTGAAGGTAT 2460 TATCAAATCACCGAATACTGAAATTTATCAACATGAAATGCCTGGTGGACAGTATTCGAA 2577 CCIGCGIGCACAGGCCACGCCACTGGCCTIGCTGATCGCTTCGAGCTCATCGAAGACAA 2580 GTATCGCAGAGTGAATTTCTTATTTGGTGATATCGTAAAGTAAGGCCATCGTCTAAAGT 2160 AGCTGCTTACGÁATTGATTGGTGAGTTAAAAGCAGCTGTAGATTTACCAATCCATCTTCA 1857 CCAGGCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGTGGGATA 1917 CACCCCGTACCCAGACTCCGTCTGCCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGT 1860 TAAAAACTATCCTGATAATGTTATTCATAAATTCGTACAAGAAGTGCTAAAGCAGCAT GGACATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGCAATCGA 1920 AGATGTCTTTAGAATTTTCGATTCATTAAACTGGGTAGATCAAATGAAAGTTGCCAATGA 2037 CGCAGTCCTGGAGACCAACACGCGGTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCT 1980 adcadracaadaadcaaccaaaarcrcadaadgracrarrrarraracaggracarrrr 2097 CTCTGATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCAGAGAT 2040 AAAICCIGAGCGAICAAACAITIAIACITIAGAGIAITAIGICAAACIAGCIAAAGAGIT 2217 TGCGGTAACCAAGCTGGTCACCGCACTGCGCCGTGAATTCGATCTGCCAGTGCACGTGCA CACCCACGACACTGCGGGTGGCCAGTTGGCTACTTTGCTGCAGCTCAAGCTGC 2397 IGCCATTGTTGCTGCATTCGCGCACACCCGTCGCGATACCGGTTTGAGCCTCGAGGCTGT 2157 2277 2400 1677 1620 1680 1737 1797 1977 pp qq ð Ω à g δ g ò a ò qq g δ qq ò à Ωp à Db à g \$ 90 \$ 90 \$ 5\$ \$ 5\$ Ω ò qq ò ò Dp à

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GAGCACACCGTGACTGAAGAAGTCACCGAGGTGGACCTGGTGAAGGCGCAGATGCGCTTG 1026
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 430 AAGTCTCGTGCGGTAACCGCCGCGAAGAAGGCTGGTCTGCCAGTTTTGGCGGAATCCACC
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      184 GGTCCAATTAAATCATATGAATTAGCAAAAGAATTTGCAGAAGAAGAAGCTGGTTTCCCGCTA
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 424 GACGAACATGGAAATATCGTACACTTATTTGAACGTGATTGTTCAGTACAACGTCGTCAT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                304 GAATTAGAAGATGCTTTCCATAGAGCAAAATCAGAAGCAGAAAAATCATTTGGTAATAGT
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               Length 3222;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             Score 428.8; DB 10; Length
Pred. No. 2.6e-122;
0; Mismatches 1607; Indels
PRIOR APPLICATION NUMBER: 60/206,848
PRIOR FLING DATE: 2000-05-23
PRIOR PLING DATE: 2000-05-26
PRIOR PLING DATE: 2000-05-26
PRIOR PLING DATE: 2000-05-26
PRIOR PLING DATE: 2000-10-23
PRIOR PLING DATE: 2000-10-23
PRIOR PLING DATE: 2000-11-27
PRIOR FILING DATE: 2000-11-27
PRIOR FILING DATE: 2000-11-27
PRIOR FILING DATE: 2000-12-22
PRIOR PLING DATE: 2000-12-22
PRIOR PLING DATE: 2001-12-2
PRIOR FILING DATE: 2001-02-16
NUMBER OF SEQ ID NOS: 14110
SOFTWARE: FASTSEQ for Windows Version 4.06
                                                                                                                                                                                                                                                                                                                                                                                                   ORGANISM: Staphylococcus aureus
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Best Local Similarity 48.1
Matches 1543; Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                         ; LOCATION: (1)...(3222)
US-09-815-242-8263
                                                                                                                                                                                                                                                                                                                                                                                                                                                 NAME/KEY: CDS
                                                                                                                                                                                                                                                                                                                                 SEQ 1D NO 8263
                                                                                                                                                                                                                                                                                                                                                                                  TYPE: DNA
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                                                                                                                                                                                                                                     ACTAACAGCTCGTCCAGGTGAATATCTAGAGCCGGTTGATTTTTGAAAAAGTCCGTGAGTT 2879
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  2760 ACAACCTGTAAATGGTTTTAATAAGATTTACAAGGGGTTATTTTAAAAGGCCAAGAAGC
                                                                                                                                                                                                                                                                                      TTCCAAGGAACGTCGCAACAGCC-----TCCAACCGCCTGCTT
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                                                                                              TAACCCTCCAGGTGGCTGGCCAGAACCACTGCGCACCCGCGCCACTGGAAGGCCGCTCCGA
                                                                                                                                                                                       AGGCAAGGCACCTCTGACGGAAGTTCCTGAGGAAGAGCAGCGCGCACCTCGACGCTGATGA
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Sequence 8263, Application US/09815242

GENERAL INFORMATION:
APPLICANT: Has beck, Robert
APPLICANT: Zyskind, Judith W.
APPLICANT: Zyskind, Judith W.
APPLICANT: Wall, Daniel
APPLICANT: Wall, Daniel
APPLICANT: Wall, Daniel
APPLICANT: Wall, Daniel
APPLICANT: Wall, Daniel
APPLICANT: Var, H. Howard
TITLE OF INVENTION: Information of Essential Genes in
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE ELITRA.011A
CURRENT APPLICATION NUMBER: US/09/815,242
CURRENT APPLICATION NUMBER: 60/191,078
PRIOR FILING DATE: 2000-03-21
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CCAGACGATAAGGGTATGCGCCAATGTTGTGGCCCAACGTCAACGGCCAGATCCGCCCAATG
                            2875 CCAGATGAAATGGTAATAGAACGATTTACTATGCGATGAATGGTCAAGCGAGACGTATT
                                                                                           2935 TATATTAAAGATGAAAATGTGCATACAAATGCGAACGTTAAGCCAAAAGCAGATAAGGT
                                                            CGTGTGCGTGACCGCTCCGTTGAGTCTGTCACCGCAACCGCAGAAAGGCAGATTCCTCC
                                                                                                                                                                                                                     3055 GGTGAAACTGTGAAAGCTAATCAGCCGTTGCTAATTACTGAAGCTATGAAAATGGAAACA
                                                                                                                           AACAAGGGCCATGCTGCACCATTCGCTGGTGTTGTCACT---GTGACTGTTGCTGAA
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COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk

COMPUTER: 10 C compatible

OPERATING SYSTEM: PC-DOS/MS-DOS/ASCII

SOFTWARE: Patentin Release #1.0, Version #1.30

CURRENT APPLICATION DATA:

APPLIACATION NAMBER: US/09/767,479

FILING DATE: 22-Jan-2001

CLASSIFICATION: UNKNOWN
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: ARCD:152/KIT
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      APPLICATION NUMBER: 08/468,793
FILING DATE: Unknown>
APPLICATION NUMBER: US NO7/956,700
FILING DATE: 02-OCT-1992
APPLICATION NUMBER: PCT/US93/09340
FILING DATE: 30-SEP-1993
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               NUMBER OF SEQUENCES: 29
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
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                                                                                                                                                                                                                                                                                                                      3439 GIGGAAGGIGGCGACTIGAICGICGICGIT 3468
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TYPE: nucleic acid
STRANDEDNESS: single
TOPOLCGY: linear
MOLECULE TYPE: other nucleic acid
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Sequence 7, Application US/09767479
Patent No. US20010036654A1
GENERAL INFORMATION:
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Pred. No. 4.7e-84;
0; Mismatches 605;
7
SEQUENCE DESCRIPTION: SEQ ID NO:
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Best Local Similarity 53.5%;
Matches 713; Conservative
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----AAGCGCTGCGCTTCCGGCAAGCCGATATTCAACTGCGCGGCCATGCGATCGAATGC 1014
                                                                            1015 CGTATCAATGCGGAAGATCCGGAATACAATTTCCGGCCGAATCCTGGCCGCATTACAGGC
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                                       1102 CGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGCG
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APPLICANT: Oblean, Kari L.
APPLICANT: Syskind, Judith W.
APPLICANT: Tranicl J.
APPLICANT: Tranick, John D.
APPLICANT: Tranick, John D.
APPLICANT: Tranick, John D.
APPLICANT: Yamanoto, Robert T.
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APPLICANT: Yamanoto, Robert T.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Yamanoto, Robert T.
APPLICANT: Xu, H. Howard
TITLE OF INVENTION: Prokaryotes
FILE REFERENCE: ELITARA.011A
FILE REPERENCE: ELITARA.011A
FILE RAPPLICATION NUMBER: 06/19, 078
FRICH APPLICATION NUMBER: 60/19, 078
FRICH RILING DATE: 2000-05-23
FRICH APPLICATION NUMBER: 60/207, 727
FRICH RILING DATE: 2000-05-23
FRICH RILING DATE: 2000-10-23
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FRICH RILING DATE: 2000-11-27
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              Sequence 6233, Application US/09815242
Patent No. US20020061569A1
GENERAL INFORMATION:
APPLICANT: Haselbeck, Robert
APPLICANT: Ohlsen, Kari L.
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ORGANISM: Escherichia coli
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US-09-815-242-6233
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GORNICKI, PIOLE
TITLE OF INVENTION: ACETYL-COA CARBOXYLASE COMPOSITIONS AND
METHODS OF USE
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COMPUTER: 1BM PC compatible
SYSTEM: PC-DOS/MS-DOS/ASCII
SOFTWARE: Patentin Release #1.0, Version #1.30
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4.4%; Pred. No. 2.2e-81;
ve 0; Mismatches 565;
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NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,928
REFERENCE/DOCKET NUMBER: ARCD:152/KIT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          APPLICATION NUMBER: US SN 07/956,700
FILING DATE: 02-OCT-1992
APPLICATION NUMBER: PCT/US93/09340
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ADDRESSEE: Arnold, White & Durkee
STREET: P.O. Box 4433
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/09/767,479
FILING DATE: 22-Jan-2001
CLASSIFICATION: UNKNOWN
PRIOR APPLICATION DATA:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               COUNTRY: United States of America
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NO: 5:
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         FILING DATE: 30-SEP-1993
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INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 3065 base pairs
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Patent No. US20010036654A1
GENERAL INFORMATION:
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STRANDEDNESS: single
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Best Local Similarity 54.4%;
Matches 691; Conservative
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STATE: Texas
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US-09-767-479-5
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1314 TTTGACAAAATTTTAATTGCCAATGCGGGGAGAAATAGCGCTGCGCTTCTCCGGGCCTGT 1373
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| Jacquence 2, Application US/09974300|
| Patent No. US20020146721A1|
| GENERAL INFORMATION:
| APPLICANT BETKA, Randy M. |
| APPLICANT BETKA: Randy M. |
| APPLICANT BETKA: Clausen, Ib Groth TITLE OF INVENTION: Methods For Monitoring Multiple General PROPER PROPER STATE CONTROL OF THE REPERENCE: 10085-500-00.
| FILE REPERENCE: 10085-500-00.
| FILE REPERENCE: 10085-500-00.
| PRIOR PLILING DATE: 2001-10-05 |
| PRIOR PLILING DATE: 2001-10-06 |
| PRIOR PLILING DATE: 2000-10-06 |
| PRIOR PLILING DATE: 2001-00.
| PRIOR PLILING DATE: 2001-00.
| SEQ ID NOS: 8481 |
| SOFTHARE: FastSEQ for Windows Version 4.0 |
| SEQ ID NO SEQ ID NOS: 8481 |
| TYPE: DATE CATALON SEQ ID NOS: 8481 |
| TYPE: DATE CATALON SEQ ID NOS: 8481 |
| SOFTHARE: RASISEQ for Windows Version 5.000-074-300-20.
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Bukaryota; Fungi; Ascomycota; Saccharomycetes;

Saccharomycetales; Saccharomycetaceae; Kluyveromyces.

I (bases 1 to 88)

Souciet,J.L., Aigle,M., Artiguenave,F., Blandin,G.,

Souciet,J.L., Aigle,M., Artiguenave,F., Lepingle,A., Llorente,B.,

Malpertuy,A., Neweglise,C., Ozier-Kalogeropoulos,O., Potier,S.,

Sautin,W., Tekaia,F., Toffano-Nioche,C., Wesolowski-Louvel,M.,

Wincker,P. and Weissenbach,J.

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PEBS Lett. 487 (1), 3-12 (2000)
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Bolotin-Eukuhara,M., Toffano-Nioche,C., Artiguenave,F.,
Duchateau-Nayyen,G., Lemaire,M., Marmeisse,R., Montrocher,R.,
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  BI618593
BG910468
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Query Match

6.8%; Score 237.4; DB 17;

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S NIH-WCG thtp://mgc.nci.nih.gov/

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I upublished (1999)

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/db_xref="taxon:9606"
/cloine="IMAGE:6185002"
/cloine_lib="Lupski_dorsal_root_ganglion"
/sex="male"
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Location/Qualifiers
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GI:6287297

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Query Match
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   Technologies and donated by J. Lupski, M.D./Ph.D. (College of Medicine) and is available through Life Technologies." 281 c 280 g 170 t
                                                                                                                                                                                                                                                                                                                                                                    18 cerecreceasasesecereasesecririecresasererecesesases
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                                                                                                                                                                                           DB 14; Length 903
                                                                                                                                                                                     Score 234.4; DB 14;
Pred. No. 3e-51;
0; Mismatches 341;
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llarity 57.3%;
Conservative
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Matches
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AQ875053 859 bp DNA linear GSS 08-NOV-1999 V12076 mTn-3xHA/lacZ Insertion Library, strain Y2278 Saccharomyces cerevisiae genomic 5', DNA sequence.

AQ875053/c LOCUS DEFINITION

RESULT 3

ACCESSION

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/organism="Saccharomyces cerevisiae"
/strain="Y2278 - $2288C background, cir(0) rho(0)"
/db_Arsef="Laxon:4932"
/db_host="E. coli"="AHA/lacZ Insertion Library, strain Y2278"
/lab_host="E. coli"="AHA/lacZ Insertion Library, strain Y278"
/lab_host="E. coli"="AHA/lacZ Insertion Library, note="Vector: pHSS6-Sal; A yeast genomic DNA library without 2 micron or mitochondrial DNA was prepared in pHSS6-Sal; genomic DNA was size-fractionated (DNA of roughly 2-3 kb in length) prior to cloning. This library was subsequently mutagenized with a mTh-3xHA/lacZ hard.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               7
Saccharomyces cerevisiae
Eukaryota; Fungi; Ascomycota; Saccharomycetes;
Saccharomycetales; Saccharomycetaceae; Saccharomycetales;
Saccharomycetales; Saccharomycetaceae; Saccharomycetales;
1 (bases 1 to 859)
Ross-Macdonald, P., Roemer, T., Coelho, P.S.R., Agarwal, S., Kumar, A., Umansky, L., Heidtman, M., Nelson, K., Iwasaki, H., Kanada, D., Jansen, R., Hager, K., Miller, P., Roeder, G.S. and Snyder, M.
Large-Scale Analysis of the Yeast Genome by Transposon Tagging and Gene Disruption
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                                                                                                                                                                                                                                                                                                                                                          Contact: Kumar A
Michael Snyder, Dept. of Mol. Cell. and Dev
Yale University
P.O. Box 208103, New Haven, CT 06520-8103,
Tel: 203 432 9949
Fax: 203 432 6161
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te of mTn-3xHA/lacZ insertion.
Seq primer: GGCCTTCTTTCTTGGAAGTAC
Class: transposon-tagged.
Location/Qualifiers
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Coccidioides immitis.

Coccidioides immitis

Eukaryota; Fungi, Ascomycota; Pezizomycotina; Eurotiomycetes;

Coccidioides immitis

Eukaryota; Fungi, Ascomycota; Pezizomycotina; Eurotiomycetes;

Corcadioides, mitosporit Onygenales; Coccidioides.

I (bases 1 to 637)

S. Gardner M. J. and Kirkland, T.

Gardner M. J. and Kirkland, T.

Gontact: Malcolm J. Gardner

Contact: Malcolm J. Gardner

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Fax: 301 88 3219

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Email: gardner@cigr.org.

S. Location/Qualifiers

Location/Qualifiers

Location/Qualifiers

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Ab xref="taxon:SO1"

Aclone = CIAAB85"

Aclone = CIAAB85"

Aclone = Liba = Coccidioides immitis spherule cDNA library"

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ST418309 Coccidioides immitis spherule cDNA library Coccidioides
immitis cDNA clone CIAAB85 5' sequence, mRNA sequence.
BF251052
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GCCGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCG 1159
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GH08678.5prime GH Drosophila melanogaster head pOT2 Drosophila
melanogaster cDNA clone GH08678 5prime, mRNA sequence.
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/db_bref="taxon:7227"
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/sex="male and female"
/dev_srage="adult"
/lab_host="Organ: head; Vector: pOT2; Site_1: EcoRI; Site_2:
/note="Organ: head; Vector: poT2; Site_1: EcoRI; Site_2: All Site_1: LeoRI; Site_2: All Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_2: LeoRI; Site_
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BDGP/HMI Drosophila EST Project
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                                             CCCCCCCACCAGAAGTCGTCGAGCTCGCCCCGGCCAAGGACCTCCCCGTCGACGTCGCG 306
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One Cyclotron Rd, Berkeley, CA 94720, USA
One Cyclotron Rd, Berkeley, CA 94720, USA
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
Plate: 86 row: G column: 6
Plate: 86 row: G column: 6
High quality sequence stop: 588.
Location/Qualifiers
718 ATCCTTGGCGATCGCACTGGAGAGTTGTACACCTTTATGAACGTGACTGCTCACTGCAG 777
                                                                                                                                        CGTCGTCACCAAAAAGTTGTCGAAAATTGCGCCAGCACAGCATTTGGATCCAGAACTGCGT 837
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Drosophila melanogaster

Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;

Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;

Enydroidea; Drosophilidae; Drosophila.
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Was musculus

Eukaryota; Metazoa; Chordata; Craniata; Vertebrata; Euteleostomi;

Bammalia; Eutheria; Rodentia; Sciurognathi; Muridae; Murinae; Mus.

1 (bases 1 to 744)

11 (bases 1 to 744)

Nath-MCC http://mgc.nci.nih.gov/.

National Institutes of Health, Mammalian Gene Collection (MGC)

Unpublished (1999)
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-CGAP_Kid14 Mus musculus cDNA clone IMAGE:5044779
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                                                                                                                                               68 GGTGCGCAACCGTAAGGAACTGCTACTCATGGACACCACCTTCCGCGATGCCCACCAGTC
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                                                                                            ACCACCGAAGGGACTCCGGAGGTCCTGGTGCGAAGGTCCGGAGGCCTTCGCCAAGGA
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                                 3,
   Length 675;
   Score 218; DB 9; Length 67
Pred. No. 6.1e-47;
0; Mismatches 270; Indels
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Email: cgapbs-r@mail.nih.gov
Tissue Procurement: Jeffrey E. Green,
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 6.3%;
Query Match 6.3
Best Local Similarity 59.0
Matches 393; Conservative
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/db_xref="taxon:10090"
/db_xref="taxon:10090"
/clone=lib="NUAGE:504-T9"
/lab_bost="DH10B (T1_phage-resistant)"
/lab_bost="DH10B (T1_phage-resistant)"
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="Organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
/note="organ: kidney; Vector: pCMV-SPORT6; Site_1: NotI;
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cDNA Library Preparation: Life Technologies, Inc.
CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)
DNA Sequencing by: Incyte Genomics, Inc.
Clone distribution: MGC clone distribution information can found through the I.M.A.G.E. Consortium/LLNL at:
http://image.llnl.gov
Plate: LLAMIL122 row: m column: 04
High quality sequence stop: 737.
Location/Qualifiers
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  1858 GAGGCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGTGGGATAC
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Pred. No. 1.3e-45;
0; Mismatches 298; Indels
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/organism="Mus musculus"
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Cone Cyclotron R6, Berkeley, CA 94720, USA
Fax: 510 486 6798
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
hit genomic AE003831: arm:2R [4976906,5137815]
estimated-cyto:46B13-46E4: 08/19/2001
Plate: RH.494 zow: E column: 11
High quality sequence stop: 543.
Location/Qualifiers
rce
/ Organism="Drosophila melanogaster"
/ Ab xref="taxon:7227"
/ Clone="RH49459"
/ Clone="RH49459"
/ Clone="RH49459"
/ Clone="RH Drosophila melanogaster normalized Head
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                                                                                                                                                                                                                                                                                                                         fruit fly.

Drosophila melanogaster

Eukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;

Neoptera; Endopeerygota; Diptera; Brachycera; Muscomorpha;

Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 60)

5 tapleton, M., Brokstein, P., Hong, L., Tyler, D., Berman, B., Carlson

3., Champe, M., Chavez, C., Dorsett, V., Farfan, D., Frise, E., George

7., Gonzalez, M., Guarin, H., Harris, N., Li, P., Liao, G., Misra, S.,

Mungall, C.J., Nunco, J., Pacleb, J., Paragas, V., Park, S.,

Phouanenavong, S., Wan, K., Yu, C., Lewis, S.E., Celniker, S. and Rubin
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               /dev_stage="Adult"
/lab_lost="DHS-alpha TonA"
/lab_lost="DHS-alpha TonA"
/note="Corgan: head; Vector: pFlc1; Site_1: XhoI; Site_2:
/note="Corgan: head; Vector: pFlc1; Site_1: Library was kindly generated by Piero Carninci at
the RIKEN. The library was normalized and excised using
cre recombinase. Plasmid cDNA library."
                                                                                                                                     RH49459.5prime RH Drosophila melanogaster normalized Head pFlc-1 Drosophila melanogaster normalized Head pFlc-1 Drosophila melanogaster connaction to BCDMA:CH061948: FBBANOGUS16 GO:[Byzuvate carboxylase (GO:0004736)] located on: 2R 46B14-46C1;: 08/19/2001, mRNA sequence. BI618593.
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671 CATACCCATGATACATCAGGGGCAGGTGTGGCAGCCATGCTGGCCTGTGCAGAGCAGGG 730
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BDGP/HHMI RH Drosophila EST Project
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Contact: Stapleton, M.
BDGP
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                                        2335 GCAGATGCTGTTGA
                                                                         731 GCTGATGTCGTGGA
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Lowaryota; Metazoa; Chordata; Craniata; Vertebrata; Buteleostomi; Mammalia; Eutheria; Primates; Catarrhini; Hominidae; Homo.

1 (Jasses I to 715)

1 (Jasses I to 715)

National Institutes of Health, Mammalian Gene Collection (MGC)

AL Unpublished (1999)

Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Contact: Robert Strausberg, Ph.D.

Contact: Procurement: David N. Louis, M.D.

CDNA Library Preparation: Life Technologies, Inc.

CDNA Library Arrayed by: The I.M.A.G.E. Consortium (LLNL)

DNA Sequencing by: Incyte Genomics, Inc.

Clone distribution: MGC clone distribution information can be found through the I.M.A.G.E. Consortium/LLNL at:

http://image.llnl.gov

Plate: LLAMNOR3 I row: d column: 12

High quality sequence stop: 715.

1. 15

1. 15

/ organism="Homo sapiens"

/ clone="IMAGE: HAXON:5666"

/ clone="IMAGE: A32203"

/ clone="IMAGE: A32203"

/ clone="IMAGE: A32203"

/ clone="IMAGE: A32203"

/ clone="IMAGE: A32203"

/ clone="IMAGE: A32203"
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1 (bases 1 to 641)

Kitayama, A., Terasaka, C., Mochii, M., Ueno, N., Shin-i, T. and Kohara, Y.
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Technologies. Note: this is a NCI_CGAP Library." 239 c 210 g 110 t
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                                                                                                                                                        Length 715
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                                                                                                                                                Score 205; DB 12; Length 7
Pred. No. 1.9e-43;
0; Mismatches 305; Indels
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/tissue_type="whole embryo"
/dev stage="stage 25"
/note="vector: pBSRN3; Site_1: Not1; Site_2: EcoR1; cDNAs were oligo-dr primed and directionally cloned. Staging according to Nieuwkoop and Raber. Library is subtracted and was constructed by N. Garrett and A.M. Zorn, (Wellcome/CR Institute). "
12 c 161 g 148 t
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Pred. No. 1.9e-42;
0; Mismatches 258; Indels
Expressed genes in X. laevis embryo Unpublished (2001)
Contact: Tadasu Shin-i Center For Genetic Resource Information National Institute of Genetics 1111 Yata, Mishima, Shizuoka 411-8540, Japan Tel: 81-559-81-6856
Fax: 81-559-81-6855
Email: tshini@genes.nig.ac.jp.
Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                     /organism="Xenopus laevis"
/db_xref="taxon:8355"
/clone="XL077c10"
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Best Local Similarity 58.6%;
Matches 369; Conservative
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Matches 304; Conservative
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                                 602104410F1 NCI_CGAP_Kid14 Mus musculus cDNA clone IMAGE:4222419
5', mRNA sequence.
BF781506
BF781506.1 GI:12086542
BF781506.1 GI:12086542
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                                                                                                                                                                                                                                                                 Mus musculus
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Matches 394; Conserv
                                                                                                                                                                                                                                      house mouse
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                        RESULT 10
BF781506
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AUTHORS
TITLE
JOURNAL
COMMENT
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Caenorhabditis elegans.
Caenorhabditis elegans.
Caenorhabditis elegans.
Caenorhabditis elegans.

Eukaryota; Metazoa; Nematoda; Chromadorea; Rhabditida; Rhabditoidea; Rhabditidae; Peloderinae; Caenorhabditis.

Thabditidae; Peloderinae; Caenorhabditis.

Thabditidae; Peloderinae; Caenorhabditis.

Thabditidae; Peloderinae; Caenorhabditis.

Rohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D., Suzuki, Y.

Rohara, Y., Shin-i, T., Thierry-Mieg, J., Thierry-Mieg, D., Suzuki, Y.

A complementary view of the C.elegans genome
Contact: Yuji Kohara
Genome Biology Lab.

Contact: Yuji Kohara
Genome Biology Lab.

National Institute of Genetics

Yata 1111, Mishina, Shizuoka 411, Japan

Tel: 81-55-81-685

Fax: 81-55-81-685

Email: ykohara@lab.nig.ac.jp.

Location/Qualifiers
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                AU202878
AU202878 unpublished oligo-capped cDNA library, stage L2
Caenorhabditis elegans cDNA clone yk813g01 5', mRNA sequence.
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// Sex="Hermaphrodite"
// Alssue type="whole animal"
// Anote="The AD-wrmcDNA library was generated with poly(A) +
Note="The AD-wrmcDNA library was generated with poly(A) +
AN isolated from both hermaphrodite and male N2 worms of
AN isolated from both hermaphrodite and dauers and the
subsequent generation of cDNAs by poly(A) priming. The
cDNAs were Class and the
103 c 124 g 142 t
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/db_xref="taxon:6239"
/clone="y/k81301"
/clone_lib="unpublished oligo-capped cDNA library, stage
                                                                                                               GCTCACCAGGCGGAGCTGGCGTTCGTTGACGGTGCAGCTCAGCTCGGTGGCGAAATCA 1225
                                                                                                                                                                                                                                                            ---CCGCACACTTTGACTCCATGCTGAAAATGACCTGCCGTGGTTCCGACTTTGAAA 1282
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TCACCACCAGGACCCTGCACGCAGCTTCCAGCCAGACACCGGCCGCATTGAGTTTTCC 425
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62.9%; Pred. No. 2.7e-41;
live 0; Mismatches 179;
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        BQ752438 19-JUL-200;
EST633001 DSCT Colletotrichum trifolii cDNA clone pDSCT12-67, mRNA
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/dev_stage="Young, actively growing mycelia (3 days after
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1 (bases 1 to 949)
Samac, D.A., Dickman, M., Town, C.D., Van Aken, S., Utterback, T., Cheung, F. and Fraser, C.M.
ESTs from mycelia of Colletotrichum trifolii race 1
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                                                  GAAGCTCAAGCTGCGTTTGGAGACGGAAGTCTTTTCGTTGAAAAGTTTGTTGAGAGACCA
                                                                                               CGTGACTGCTCACTGCAGCGTCGTCACCAAAAAGTTGTCGAAATTGCGCCAGCACAGCAT
                                                                                                                GGTTACCAGGGCGCGCGCAACCGTGGAATTCTTGGTCGATGAAAAGGGCAACCACGTTTTC
                                                                                                                                                                                                                                                         272 GGATACCAAAATGCTGGTACAGTCGAATTCCTGGTTGATCAGAAGGGCAACTACTATTTC
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                              CAGCACATTGAAGTGCAGATCCTTGGCGATCGCACTGGAGAAGTTGTACACCTTTATGAA
                                                                                                                                                            TTGGATCCAGAACTGCGTGATCGCATTTGTGCGGATGCAGTAAAGTTCTGCCGCTCCATT
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                                                                                                                                                                                                                                                                                         ATCGAAATGAACCCACGTATCCAGGTTGAGCACCCGTGACTGAAGAAGTCACCGAGGTG
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     Email: debbys@puccini.crl.umn.edu
TIGR sequence name: MTSAL67TV More information
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                Contact: Deborah A. Samac
Department of Plant Pathology
University of Minnesota
495 Borlaug Hall, 1991 Upper Buford Circle,
Tel: 612 625 1243
Fax: 651 649 5058
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             1. .949
/organism="Colletotrichum trifolii"
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Location/Qualifiers
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/clone="pDSCT12-67"
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BQ752438.1 GI:21907843
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Colletotrichum trifolii
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Other_ESTs: EST633000
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COMMENT

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/note="Vector: Bluescript SK+; Site 1: EcoRI; Site 2: EcoRI; isolate: 2sp2; cDNA was prepared from polyA+enriched RNA The cDNA was ligated into Lambda gtll from Stratagene and packaged using Gigapack packaging extracts. An aliquot of the amplified library was used to transduce E. coli Y1090 and phage DNA was purified from a liquid lysate. The cDNA inserts were gel purified after EcoRI digestion and ligated into pBluescript SK+. Aliquots of the ligation were used to transform E. coli DHSalpha which were plated onto medium with X-gal for selection of
inoculation) grown in liquid culture (cutin minimal medium containing 2%glucose)."
/lab_host="DH5alpha"
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Best Local Similarity 54.7%;
Matches 412; Conservative
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RH70532.Sprime RH Drosophila melanogaster normalized Head pFlc-1

Drosophila melanogaster normalized Head pFlc-1

BCDNA.Glone RH70532 5 similar to

BCDNA.GH06348: PBan0001516 GO: [pyruvate carboxylase (GO:0004736)]
                                                                                                                                                                                           Drosophila melanogaster

Bukaryota; Metazoa; Arthropoda; Hexapoda; Insecta; Pterygota;
Neoptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophila.

Ephydroidea; Loseophilae; Drosophila.

1 (Dases 1 to 666)

Stapleton, M., Brokstein, P., Hong, L., Tyler, D., Berman, B., Carlson, J., Champe, M., Chavez, C., Dorsett, V., Farfan, D., Frise, E., George, M., Guazin, H., Harris, N., Li, P., Liao, G., Misra, S., Mungall, C.J., Nunco, J., Pacleb, J., Paragas, V., Park, S.,

Phydianenavong, S., Wan, K., Yu, C., Lewis, S.B., Celniker, S. and Rubin
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/dev stage="Adult"
/lab_host="DH5-alpha TonA"
/note="Organ: head; Vector: pFlc1; Site_1: XhoI; Site_2:
/note="Organ: head; Vector: pFlc1; Site_1: XhoI; Site_2:
BamHI; Library was kindly generated by Piero Carninci at
the RIKEN. The library was normalized and excised using
cre recombinase. Plasmid cDNA library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                            Lawrence Berkeley National Lab
Character Marcheley CA 94720, USA
Pax: 510 486 6798
Email: http://www.fruitfly.org/EST, est@fruitfly.berkeley.edu
htt genomic AE001381: arm.2R [4876906,5137815]
estimated-cyto:46813-4684: 08724/2001
Plate: RH 705 row: C column: 8
High quality sequence stop: 521.
Location/Qualifiers

rce
1. 666
/organism="Drosophila melanogaster"
/db_xref="texon:727"
/clone="RH70532"
/clone="RH70532"
/clone="RH70532"
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          GCCCACCAGTCGCTGCTGGCCACCCGCGTGCGTTCCCACGATCTGCTGAAGATCTCCCCC
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  3;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             5.6%; Score 195; DB 13; Length 666;
llarity 58.2%; Pred. No. 8.78-41;
Conservative 0; Mismatches 256; Indels
                                                                                                                                                                                                                                                                                                                                                                                            RH Drosophila EST Project ed (2001)
                                                                                                                         BI605019
BI605019.1 GI:15500544
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Unpublished
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es 361;
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RESULT 13
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LOCUS
DEFINITION
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Direct Submission

Submitted (07-SEP-2000) Genoscope - Centre National de Sequencage, Submitted (07-SEP-2000)

Submitted (07-SEP-2000)

2 tue Gaston Cremieux, CP 5706, 91057 EVRY cedex, FRANCE. (E-mail is gegref@genoscope.cns.fr - Web : www.genoscope.cns.fr)

This GSS is part of a random genomic sequencing program of thirteen yeast species: Saccharomyces bayanus var. uvarum, Saccharomyces exiguus, Saccharomyces exiguus, Saccharomyces servazzii, Zygosaccharomyces rouxii, Kluyveromyces thermotolerans, Kluyveromyces lactis var. lactis, Kluyveromyces marxianus var. marxianus, Pichia angusta, Debaryomyces hansenii var. hansenii, Pichia sorbicophila; Candida tropicalis and Yarrowia lipolytica. Genomic inserts of 3 to
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                CNSOGMGL 1030 bp DNA linear GSS 17-JUN-2001 T3 end of clone AUOAA002D08 of library AUOAA from strain CBS 3082 of Saccharomyces kluyveri, genomic survey sequence.
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Saccharomyces kluyveri.

Saccharomyces kluyveri.

Saccharomycetales; Saccharomycotina; Saccharomycetes;

Saccharomycetales; Saccharomycetaceae; Saccharomycetes;

Saccharomycetales; Saccharomycetaceae; Saccharomycetes;

Balotin-Fukuhara, M., Ban, E., Brottier, P., Casaregola, S.,

Bolotin-Fukuhara, M., Ban, E., Brottier, P., Casaregola, S.,

Malpertuy, A., Neuveglise, C., Ozier-Kalogeropoulos, O., Potier, B.,

Saurin, W., Tekaia, F., Toffano-Nioche, C., Wesolowski-Louvel, M.,

Wincker, P. and Weissenbach, J.

Genomic exploration of the hemiascomycetous yeasts: 1. A set of

Pess species for molecular evolution studies
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            346 CGCATCCCGAACATTCCCTTCCCAGATGCTGTGCGCGGAGCCAACGCCGTCGGCTACACC 405
2041 GTCCTGGAGACCAACACCGCGGTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCT
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             GATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAAGATGGCAGAGGAGATCGTC
                                                                                                                 1861 GCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACGTGGGATACACC
                                                                                                                                                                                                                                                                     CCGTACCCCAGACTCCGTCTGCCGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGAC
                                                                                                                                                                                                                                                                                                                                      Saccharomyces kluyveri
FEBS Lett. 487 (1), 56-60 (2000)
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<12. .>1029
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PVC2 ; purvate carboxylase 2 ]
2 putative frameshift(s)
8 similar to Saccharomyces cerevisiae ORF YGL062w [ PYC1 pyruvate carboxylase 1 ]"
/evidence=not experimental
1 247 c 230 g 282 t 1 others
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       1544 ATAAGCTGCCCAACATCAAGGATCTGCCACGCGGGTTCCCGTGACCGC----- 1596
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5 kb were prepared and both extremities were sequenced. See keywords for description of this sequence and for the sequence the other extremity of this insert.
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 81 ccaagaarccaagrccaacaraccarcacrcaagaarcacccgrcrccaccrrcrcaccr 140
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   501 ACCCÁTTCCGTGTÍCAAGAGCGGTGAATATTGGACTACTTÍCATCGACGACACTCCACAA 560
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    561 crarridaaarggrircricaaaacagagcccaaaagrigcracacraccriggccgac 620
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                 DB 17; Length 1030;
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          Indels

    1030
/organism="Saccharomyces kluyveri"

                                                                                                                                                                                                                                                                                                                                                                                                                                                               Score 193.2; DB 17;
Pred. No. 3.5e-40;
0; Mismatches 423;
                                                                                                                              /strain="CBS 3082"
/db_xref="taxon:4934"
/clone="AU0AA002D08"
                                                                   Location/Qualifiers
                                                                                                                                                                                                    /clone_lib="AU0AA"
                                                                                                                                                                                                                                                                                                                                                                                                                                                               5.6%;
ilarity 53.3%;
Conservative
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   Local Similarity
                                                                                                                                                                                                                                             misc_feature
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AI293242 GH Drosophila melanogaster head pOT2 Drosophila melanogaster head pOT2 Drosophila melanogaster con GHI6378 5prime, mRNA sequence.
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/db xref="taxon:7227"
/clone="dyl16378"
/clone=lib="GH Drosophila melanogaster head pOT2"
/sex="male and female"
/sex="male and female"
/dev stage="adult"
/lab_host="Dyl2"
/lab_host="Dyl2"
/note="Organ: head; Vector: pOT2; Site_1: EcoRI; Site_2:
Xhoi; Sized fracthonated cDNAs were directly ligated Into
pot2. Plasmid cDNA library."
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        Drosophila melanogaster
Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta; Pterygota;
Bukaryota, Metazoa, Arthropoda, Hexapoda, Insecta; Pterygota;
Boptera; Endopterygota; Diptera; Brachycera; Muscomorpha;
Ephydroidea; Drosophilidae; Drosophila.

1 (bases 1 to 625)
Harvey,D., Brokstein,P., Hong,L., Evans-Holm,M., Su,C., Tsang,G.,
Lefis,S. and Rubin,G.M.
BOGP/HIMI Drosophila EST Project
Unpublished (2001)
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           Lawrence Berkeley National Lab
One Cyclotron Rd, Berkeley, CA 94720, USA
Fax: 510 486 6798
Email: http://www.fruitfly.org/EST., est@fruitfly.berkeley.edu
Plate: 163 row: G column: 6
High quality sequence stop: 473.
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                                                                                                                                                                                                                                                                                                                   921 TGGCTGGTGCTTTTGCTTTTGGAATGTTGGGGTGCTGGTGC-ACTTTCGACGTTGCCATGAGAT
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                                                                                                                                                                                         TTGCGACCCGAGTCCGCTCATTCGCACTGAAGCCTGCGGCAGAGGCCGTCGCAAAGCTGA
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                                          741 CAGCTGGCTGGAGATGTTTTGTTGGAGCAAGGTCCTGAAGGATTTGCCAAACAAGTCC
                                                                                                                                         801 GTAAATACAACGGTACTTTGTTGATGGACACCACCTGGAGAGATGCCCACCAATCTTTGC
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-- CTGAAGCAGCTTGGCCCCAGCCGCGTTTGCTCGTGATCTCC
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217 ACAAGTTCTGTGAGCTGGCTGTGCAGACCGGCATGGACATCTTCAGGGTGTTGACTGGC 276
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LENGTH: 3621
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GenCore version 5.1.3
Copyright (c) 1993 - 2003 Compugen Ltd.
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Patent No. 6171833
GENERAL INFORMATION:
Patent No. 6171833
GENERAL INFORMATION:
APPLICANT: Sinskey, Anthony J.
APPLICANT: Lessard, Philip A.
APPLICANT: Stephanopoulos, Gregory
TITLE OF INVENTION: Pyruvate Carboxylase from Corynebacterium glutamicum
FILE REFERENCE: 1533.079000
CURRENT PAPLICANTION NUMBER: US/09/220,081
CURRENT FILING DATE: 198
SUPPREE: PatentIn Ver. 2.0
             Sequence 96, Ap
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US-09-134-001C-767
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US-09-265-315-96
US-09-266-417-96
US-09-103-840h-1
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US-08-918-65-61-5
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Best Local Similarity 98.6%;
Matches 3427; Conservative
    ; NAME/KEY: CDS
; LOCATION: (199)..(3621)
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; NAME/KEY: CDS
; LOCATION: (199)..(3621)
US-09-677-575-1
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Sequence 1, Application US/09677575
Patent No. 6403351
GENERAL INFORMATION:
APPLICANT: Sinskey, Anthony J.
APPLICANT: Lessard, Philip A.
APPLICANT: Willis, Laura B.

US-09-677-575-1

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APPLICANT: Stephanopoulos, Gregory
TITLE OF INVENTION: Pyruvate Carboxylase from Corynebacterium glutamicum
FILE REFERENCE: 1533.07900000
CURRENT APPLICATION NUMBER: 08/09/677,575
CURRENT FILING DATE: 2000-10-03
PRIOR PILING DATE: 1998-12-23
NUMBER OF SEQ ID NOS: 36
SOFTWARE: Patentin Ver. 2.0
SEQ ID NO 1
LENGTH: 3621
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Pred. No. 0;
0; Mismatches
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Best Local Similarity 98.6%;
Matches 3427; Conservative 0
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8	1861	GCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGTGGGATACACC 1920
g	0	GCGATGCCGAATGTAAACATTCAGATGCTGCTTCGCGGCCGCAACACCGTGGGGATACACC 206/
δλ	1921	CCGTACCCAGACTCCGTCTGCCGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGAC 1980
Ωp	90	CCGTACCCAGACTCCGTCTGCCGCGCGTTTGTTAAGGAAGCTGCCAGCTCCGGCGTGGAC 2127
ογ	1981	ATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGCAATCGACGCA 2040
qa	12	ATCTTCCGCATCTTCGACGCGCTTAACGACGTCTCCCAGATGCGTCCAGCAATCGACGCA 2187
ò	2041	GTCCTGGAGACCAACACCGCGGTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCT 2100
අධ	18	GTCCTGGAGACCAACACCGCGGTAGCCGAGGTGGCTATGGCTTATTCTGGTGATCTCTCT 2247
λo	0	GATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTC 2160
qq		GATCCAAATGAAAAGCTCTACACCCTGGATTACTACCTAAAGATGGCAGAGGAGATCGTC 2307
δ	16.	AAGTCTGGCGCTCACATTCTGGCCATTAAGGATATGGCTGGTCTGCTTCGCCCAGCTGCG 2220
ДQ	08	ATCTTGGCCATTAAGGATATGGCTGGTCTGCTTCGCCCAGCTGCG
ð í	221	GTAACCAAGCTGGTCACCGCACTGCGCCGTGAATTCGATCTGCCAGTGCACGTGCACACC 2280
gg	36	T.A.C.
ò	5 8	AGAT
qq	2428	AGAT
δ	34	TGCC
QQ	8	TGCC
ò	40	FITCT
ΟQ	54	TTTCT
δ	46	SAACC
qq	2608	saacc 266
8	22	ACCTG 258
QG	99	Accre 272
δ	2581	ACTAC 264
qq	72	ACTAC 278
δ	4	FTGTT 270
qq	78	rrgrr 284
δ	70	CAGAC 276
qu	84	CCAT 290
ογ	76	STAAC 282
Ωp	90	staac 296
δ	2821	GAAGGC 28
Dp	96	AAGGC 302
λ	88	ATTCC 294
qq	02	ATTCC 308
ò	2941	rccrc 300

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Patent No. 6380370

GENERAL INFORMATION:

GENERAL INFORMATION:

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TITLE OF INVENTION: BPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS

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TITLE OF INVENTION: BPIDERMIDIS FOR DIAGNOSTICS AND THERAPEUTICS

CURRENT APPLICATION NUMBER: US/09/134,001C

CURRENT FILING DATE: 1998-08-13

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PRIOR PRIOR FILING DATE: 1997-08-14

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US-08-476-537-5
Sequence 5, Application US/08476537
Patent No. 5756290
GENERAL INFORMATION:
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                                                                                                                                                                               Sequence 5, Application US/07956700B
Patent No. 5539092
GENERAL INFORMATION:
APPLICANT: Robert Haselkorn and Piotr Gornicki
TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoA
TITLE OF INVENTION: Carboxylase
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
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321 No. 5539092th Clark Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  ATTORNEY AGENT INFORMATION:
NAME: Thomas E. No. 5539092thrup
REGISTATION NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION INFORMATION:
TELEPHONE: 1-312-744-0090
TELEPHONE: 1-312-755-4489
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/07/956,700B
FILING DATE: 19921002
CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   ZIP: 60610
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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STRANDEDNESS: Single
3438 ATTAGTGGAAATT 3450
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STATE: Illinois
COUNTRY: USA
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TITLE OF INVENTION:
TITLE OF INVENTION:
CYANDBACTERIAL and Plant Acetyl-COA
TITLE OF INVENTION:
CANDBACKERS:
NUMBER OF SEQUENCES:
LIG
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
STREET: 321 No. 5756290th Clark Street
CITY:
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8.8%; Score 306.6; DB 1; Length
Best Local Similarity 53.6%; Pred. No. 2.3e-75;
Matches 714; Conservative 0; Mismatches 604; Indels
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             PELLICALIA.

PILLING DATE:
CLASSIFICATION: 435

CLASSIFICATION DATE:
APPLICATION NUMBER: 07/956,700

FILLING DATE: 10/21/92

ATTORNEY/AGENT INFORMATION:
NAME: THORNATION:
NAME: THORNATION:
FERFENCE/DOCKET NUMBER: 33,268

REFERENCE/DOCKET NUMBER: ARCD:058

FELECOMMUNICATION INFORMATION:
FILEPAX: 1.312-744-0090

TELLEPAX: 1.312-755-4489

INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH: 1362 base pairs
FYPE: Nucleic acid
STRANDEDNESS: Single
MOLECULE TYPE: Oligonucleotide
US-08-476-537-5

RELECATION FOR SEQ ID NO: 5:
STRANDEDNESS: Single
STRANDEDNESS: Single
US-08-476-537-5

RELECATION FOR SEQ ID NO: 5:
FYPE: Nucleic acid
STRANDEDNESS: Single
STRANDEDNESS: Single
HORGING AND SEG ID NO: 5:
FYPE: Nucleic acid
STRANDEDNESS: Single
STRANDEDNESS: SINGLE
FYPE: Oligonucleotide
US-08-476-537-5
                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/476,537
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Patent No. 5792627
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoATITLE OF INVENTION: Carboxylase
NUMBER OF SEQUENCES: 116
CORRESPONDENCE ADDRESS:
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Patent No. 5972644
Patent No. 5972644
Patent No. 5972644
Patent No. 5972644
TUTLE OF INVENTION: Cyanobacterial and Plant Acetyl-Contrib. PITLE OF INVENTION: Carboxylase
NUMBER OF SEQUENCES: 116
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
STREET: 321 No. 5972644 5786170th Clark Street
CITY: Chicago
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US-08-475-879-5
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3: Arnold, White & Durkee
321 No. 5792627th Clark Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  NAME: Thomas E. No. 5792627thrup
REGISTRATION NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION INFORMATION:
TELEPHONE: 1-312-744-0090
TELEFAX: 1-312-75-4489
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                             SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/485,607
FILING DATE: 07-UIN-1995
CLASSIFICATION: 800
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             ARCD: 058
                                                                                                                                                                                                                                       MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            ; MOLECULE TYPE: Oligonucleotide US-08-485-607-5
ADDRESSEE: Arnold, White &
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/95
FILING DATE: 10/21/92
ATTORNEY/AGENT INFORMATION:
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Matches 714; Conservative
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EDNESS: Single
                                                                                                                                                                   ZIP: 60610
COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
                                                                   Chicago
Illinois
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STRANDEDNESS:
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                                                                                                   STATE: I.
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8.8%; Score 306.6; DB 2;
Best Local Similarity 53.6%; Pred. No. 2.3e-75;
Matches 714; Conservative 0; Mismatches 604;
COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
COMPUTER: IBM PC COMPATIBLE
CLASSIFICATION NUMBER: US/956,700
FILING DATE: 10/21/92
APPLICATION NUMBER: 33,268
FRING APPLICATION NUMBER: 33,268
FRING APPLICATION NUMBER: 33,268
FRING APPLICATION NUMBER: 33,268
FRESENCE/DOCKET NUMBER: 33,268
FRESENCE/DOCKET NUMBER: 33,268
FREDEPHONE: 1-312-75-4489
INFORMATION FOR SEQ ID NO: 5:
SEQUENCE CHARACTERISTICS:
LENGTH 1362 base pairs
FYPE: Nucleic acid
                                                                                                                                                                                                                                                                                                                                                                   TOPOLOGY: Linear

MOLECULE TYPE: Oligonucleotide
US-08-475-879-5
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RESULT 8
US-09-433-043B-5
US-09-433-043B-5
Sequence 5, Application US/09433043B
Patent No. 659931-7
Patent No. 659931-7
Patent No. 669931-7
Patent INFORMATION:
PAPPLICANT: HASELKORN, ROBERT
PAPPLICANT: HASELKORN, ROBERT
PAPPLICANT: CYANOBARICKI, BIOTR
PILE REFERENCE: ARCD:38 US/09/433,043B
CURRENT PAPLICATION NUMBER: 08/09/433,043B
CURRENT FILING DATE: 1999-10-25
PRIOR PAPLICATION NUMBER: 09/756,700
PRIOR PAPLICATION NUMBER: 07/956,700
PRIOR PAPLICATION NUMBER: 07/956,700
PRIOR PAPLICATION NUMBER: 07/956,700
SOFTWARE: PatentIN Ver: 2.1
SEQ ID NO 5
LENGTH: 1362
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                                           604 AAATTTATCGATCGCCCACGCCACGTTGAATTTCAGATCTTGGCCGATGCCTACGGCAAT 663
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582 CGTGCTGTGATTAACCCCCAGCACATTGAAGTGCAGATCCTTGGCGATCGCACTGGAGAA
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                                                  ; OTHER INFORMATION: Description of Artificial Sequence: Synthetic US-09-433-043B-5
                                                                                                         DB 4; Length 1362;
                                                                                                    8.8%; Score 306.6; DB 4; Length ilarity 53.6%; Pred. No. 2.3e-75; Conservative 0; Mismatches 604; Indels
TYPE: DNA ORGANISM: Artificial Sequence
                                                                                                                      Similarity
                                                                                                    Query Match
Best Local Simil
Matches 714; C
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TTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGC
                                                      ----Aadcgcridcdcriccggcaaadccgararrcaacrgcgcgccargcgarggargc
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Patent No. 5801233
GENERAL INFORMATION:
APPLICANT: Haselkorn, Robert
APPLICANT: Gornicki, Piotr
TITLE OF INVENTION: NUCLEIC ACID COMPOSITIONS ENCODING
TITLE OF INVENTION: THEREFOR
NUMBER OF SEQUENCES: 40
CORRESPONDENCE ADDRESS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: Eloppy disk
COMPUTER: Eloppy disk
COMPUTER: Elb PC Compatible
OPERATIOR SYSTEM: PC-0DS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/611,107
FILING DATE: CONCURRENTLY Herewith
CLASSIFICATION NUMBER: US N 07/956,700
PRIOR APPLICATION NUMBER: US SN 07/956,700
PRILING DATE: 02-OCT-1992
PRILING DATE: 30-SEP-1993
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FILING DATE: 14-APR-1995
ATTORNEY/AGENT INFORMATION:
NAME: Kitchell, Barbara S.
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REFERENCE/DOCKET NUMBER: ARCD:221
TELECOMUNICATION INFORMATION:
TELEPHONE: (512) 418-3000
TELEFAX: (512) 474-7577
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                                                                                                                     Length 1362;
                                                                                                                   Score 305; DB 1; Length 13
Pred. No. 6.4e-75;
0; Mismatches 605; Indels
                                                                                                                     Query Match
Best Local Similarity 53.5%;
Matches 713; Conservative (
| INFORMATION FOR SEQ ID NO: 7:
| SEQUENCE THARACTERISTICS:
| IENGTH: 1362 base pairs
| TYPE: nucleic acid
| STRANDEDNESS: single
| TOPOLOGY: linear
| US-08-611-107-7
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TTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGC
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APPLICANT: Haselkorn, Robert
APPLICANT: Haselkorn, Robert
APPLICANT: Gornicki, Piotr
TITLE OF INVENTION: ACETYL-COA CARBOXYLASE COMPOSITIONS AND
TITLE OF INVENTION: METHODS FOR USE
NUMBER OF SEQUENCES: 31.
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
STREET: P.O. Box 4433
CITY: Houston
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               STATE: TX
COUNTRY: USA
ZIP: T7210-4433

ZIP: T7210-4433

COMPUTER READABLE PORN:
MEDIUM TYPE: F120PDY disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: PatentIn Release #1.0, Version #1.30
CURRENT APPLICATION NDATA:
APPLICATION NUMBER: US 07/956,700
FILING DATE: 14-APR-1995
CLASSIPICATION NUMBER: US 07/956,700
FILING DATE: 0-C-CT-1992
ATTORNEY/AGENT INFORMATION:
NAME: Wilson, MAT* B.
REFERENCE/DOCKET NUMBER: 37,259
REFERENCE/DOCKET NUMBER: 37,259
REFIRENCE/DOCKET NUMBER: 37,259
REFERENCE/DOCKET NUMBER: 37,259
REFERENCE SI2-418-3000
TELEFFX: 512-418-3000
TELEFFX: 512-418-3000
TELEFFX: 512-418-3000
TYPE: NUMBER: 31-277-77
INFORMATION FOR SEQ ID NO: 7:
SEQUENCE CHARACTERISTICS:
LENGTH: 13-62 Dase Pairs
TYPE: NUCleic acid
STRANDEDNESS: single
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US-08-422-560A-7
; Sequence 7, Application US/08422560A
; Patent No. 5910626
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United States of America
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NAME: Kitchell, Barbara S.
REGISTRATION NUMBER: 33,92
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FILLING DATE: 30-SEP-1993
CLASSIFICATION: 800
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INFORMATION FOR SEQ ID NO: 7
SEQUENCE CHARACTERISTICS:
LENGTH: 1362 base pairs
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COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy
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COUNTRY: Uni
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                                                                                                                                                                                                                                                               205 CGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACTGAAGGCTCACCAGTCAAGGCGTAC 264
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                                                                                     15;
                                                   Length 1362;
                                                 Score 305; DB 2; Length 13
Pred. No. 6.4e-75;
0; Mismatches 605; Indels
                                               Query Match
Best Local Similarity 53.5%;
Matches 713; Conservative
linear
; TOPOLOGY:
US-08-422-560A-7
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---- AAGCGCTGCGCTTCCGGCAAGCCGATATTCAACTGCGCGGCCATGCGATGC 1014
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                                                                                                                            1015 CGTATCAATGCGGAAGATCCGGAATACAATTTCCGGCCGAATCCTGGCCGCATTACAGCC
                                                                           CGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGCG
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CURRENT APPLICATION DATA:

APPLICATION NUMBER: US/08/468,793

FILING DATE: 06-JUN-1995

CLASSIFICATION NUMBER: US/08/468,793

FILING DATE: 14-APR-1995

APPLICATION NUMBER: US 08/422,560

FILING DATE: 14-APR-1995

APPLICATION NUMBER: US SN 07/956,700

FILING DATE: 02-OCT-1992

CLASSIFICATION: 800
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COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS/ASCII
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    Sequence 7, Application US/08468793
; Patent No. 6177267
; GENERAL INFORMATION:
APPLICANT: Haselkorn, Robert
APPLICANT: Gornicki, Plotr
TITLE OF INVENTION: ACETYL-COA CARBOX
; TITLE OF INVENTION: ACETYL-COA CARBOX
; NUMBER OF SEQUENCES: 29
; CORRESPONDENCE ADDRESS:
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                                                                                                                                                85 TTCAAAAAGATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCA 144
                                                                                                                                                                                                                                       67 GAAGAACTCGGGATCGCCGTTCACTCCACTGTGGATCGCAACGCGCTCCAT 126
                                                                                                                                                                                                                                                                     CGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACTGAAGGCTCACCAGTCAAGGCGTAC 264
                                                                                                                                                                                                                                                                                                 127 GTGCAGTTAGCGGACGAAGCGGTCTGTATTGG----CGAAGCGGCCAGCAGCAAAAGCTAT 183
                                                                                                                                                                                                                                                                                                                                CIGGACATCGATGAAATTATCGGTGCAGCTAAAAAAGTTAAAGCAGATGCTATTTACCCG 324
                                                                                                                                                                                                                                                                                                                                                          CICAAIAICCCCAACAICAIIGCGGGGGGCCTGACCCGIAAIGCCAGCGCCAIICACCC
                                                                                                                                                                                                                                                                                                                                                                                        GGATATGGCTTCCTGTCTGAAATGCCCAGCTTGCCCGCGAGGCGCGGAAAACGGCATT 384
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                                                                                                                    15;
                                                                                     Query Match 8.8%; Score 305; DB 4; Length 1362; Best Local Similarity 53.5%; Pred. No. 6.4e-75; Matches 713; Conservative 0; Mismatches 605; Indels 1
; TYPE: nucleic acid
; STRANDEDNESS: single
; TOPOLOGY: linear
; MOLECULE TYPE: other nucleic acid
US-08-468-793-7
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                                                                                                                                                CGCATCACCACGGAAGATCCAAACAACGGCTTCCGCCCAGATACCGGAACTATCACCGCG 1161
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1042 TTGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGC 1101
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CID: 94025

COMPUTER READABLE FORM:

MEDIUM TYPE: Floppy disk
COMPUTER IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
COMPUTER: IBM PC compatible
SOFTWARE: Patentin Release #1.0, Version #1.25
CURRENT APPLICATION NUMBER: US/08/074,121
FILING DATE: 08-JUN-1993
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: REFERENCE/DOCKET NUMBER: 05938/043001
TELEPHONE: (415) 854-0875
TELEPHONE: (415) 854-0875
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FEATURE:
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                                                                                                                                                                                                                                                                                 149 AAACCGGTGCACCACGGTAGCTATTTACCCCCGTGAAGATCGGGGATCATTCCACCGCT 208
                                                                                                                                                                                                    89 AAAAGATCTIGGIAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCACTCG 148
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                                                                                                                                                              24;
                                                                                                                      Length 3077;
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                                                                                                                    Score 302.2; DB 1;
Pred. No. 6e-74;
0; Mismatches 563;
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ilarity 54.9%;
Conservative
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1281..2626
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                                     ; NAME/KEY:
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US-08-074-121-1
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Matches 714;
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2410 TACCGCCGTACTATGACTCAATGATCGGTAAGCTGATTTGCTACGGTGAAAACCGTGACG 2469
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TGAAGGAATTGGGTCTGACCCAAGATAAGATCAAGACCCACGGTGCAGCACTGCAGTGCC
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GENERAL INFORMATION:
FOR INVENTION:
TITLE OF INVENTION:
Methods and Compositions for Modulating
TITLE OF INVENTION:
MUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
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ATTORNEY/AGENT INFORMATION:
MAME: Rea-Venter, Barbara
REGISTRATION NUMBER: 32,750
REFERENCE/DOCKET NUMBER: CGNE-097/WO
TELECOMMUNICATION INFORMATION:
TELEPHONE: (415) 926-6200
TELEFAX: (415) 984-3713
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   COMPUTER READABLE FORM:
MEDIUM TYPE: Floppy disk
COMPUTER: IBM PC compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
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SEQUENCE CHARACTERISTICS:
LENGTH: 3077 base pairs
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TYPE: Oligonucleotide
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                                                                                                                     149 AAACCGGTGCAGGCACGGTAGCTATTTACCCCCGTGAAGATCGGGGATCATTCCACCGCT
                               24;
     Length 3077;
                               Indels
   Query Match 8.74; Score 302.2; DB 5; Best Local Similarity 54.94; Pred. No. 66.74; Matches 714; Conservative 0; Mismatches 563; Matches 714; Conservative 0; Mismatches 563.
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TGGCGATTGCCCGCATGAGAATGCGCTGCAGAGCTGATCACACGGTATCAAAACCA 2529 1374 GAGGAAATGGGATTGCGATCGAGTTCATTCGACTGTTGACGGAATGCTCTTCAT 1433 ---CCTTCCTGCCAAGTCCGGGCAAAATCACCCGTT 2349 1163 ACCECTCACCAGGCGGAGCTGGCGTTCGTCTTGACGGTGCAGCTCAGCTCGGTGGCGAAA 1222 racceccerachardacreandarcegraageridarrideracegridaadeceridaeg 2469 1314 TTTGACAAAATATTAATTGCCAAATCGGGGAAAAATAGCGCTGCGCATTCTCCGCGCCTGT 1373 TCACCGCACACTTTGACTCCATGCTGAAAATGACCTGCCGTGGTTCCGACTTTGAAA 1282 145 CTCGAAACCGGTGCAGCCACGGTAGCTATTTACCCCCGTGAAGATCGGGGATCATTCCAC 204 85 TTCAAAAAGATCTTGGTAGCAAACCGCGGCGAAATCGCGGTCCGTGCTTTCCGTGCAGCA 144 CTGCTGTTGCTCGTGCGCGCGTTGGCTGAGTTCACCGTGTCTGGTGTTGCAACCA Ouery Match 8.5%; Score 297; DB 1; Length 3065; Best Local Similarity 54.4%; Pred. No. 1.76-72; Matches 691; Conservative 0; Mismatches 565; Indels 15; Sequence 1., Application US/07956700B
Patent No. 5539092
GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoATIONE OF FORWARD CARDOXYLASE
NUMBER OF SEQUENCES: 116
CORRESPONDENCE ADDRESS: ADDRE ACGITGATCTGCAGATCCGCATCATGAATGACGAGAAACTTC 2570 1343 ACATTGGTTTCTTGCGTGCGTTGCTGCGGGAAGAGGACTTC 1383 3: Arnold, White & Durkee OPERATING SYSTEM: PC-LOUS/MS-LOUS
SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION DATA:
APPLICATION DATA:
APPLICATION WINDER: US/07/956,700B
FILING DATE: 19921002
CLASSIFICATION: 800
ATTORNEY/AGENT INFORMATION:
NAME: Thomas E. No. 555,9092thrup
REGISTRAILON NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECHONE: 1-312-744-0090
TELECHONE: 1-312-744-0090
INFORMATION FOR SEQ ID NO: 1:
SEQUENCE CHARACTERISTICS:
LENGTH: 3065 base pairs
TYPE: Nucleic acid
TYPE: Nucleic acid STREET: 321 No. 5539092th Clark St CITY: Chicago STATE: 111inois COUNTRY: USA ZIP: 60610 COMPUTER READABLE FORM: MEDIUM TYPE: Floppy Disk COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE COMPUTER: IBM PC COMPATIBLE

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2502 ACTGCTATTAACCGCATGAAACGCGCCCTCAGGAATGCGCCATCACTGGATTACCTACA 2561
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8.5%; Score 297; DB 1; Length 3065;
Best Local Similarity 54.4%; Pred. No. 1.7e-72;
Matches 691; Conservative 0; Mismatches 565; Indels 15;
                                                                                                                                                                                                           Sequence 1, Application US/08476537
; Patent No. 5756290
; GENERAL INFORMATION:
GENERAL INFORMATION:
TITLE OF INVENTION: Cyanobacterial and Plant Acetyl-CoA
TITLE OF INVENTION: Garboxylase
NUMBER OF SEQUENCES:
CORRESPONDENCE ADDRESS:
ADDRESSEE: Arnold, White & Durkee
                                                                                                                                                                                                                                                                                                                                                                                                    E: Arnold, White & Durkee
321 No. 5756290th Clark Street
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            FILING DATE:
CLASSIFICATION: 435
PRIOR APPLICATION DATA:
APPLICATION NUMBER: 07/956,700
FILING DATE: 10/21/92
ATTORNEY/AGENT INFORMATION:
NAME: Thomas E. No. 5756290thrup
REGISTRATION NUMBER: 33,268
REFERENCE/DOCKET NUMBER: ARCD:058
TELECOMMUNICATION INFORMATION:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           MEDIUM TYPE: Floppy Disk
COMPUTER: IBM PC Compatible
OPERATING SYSTEM: PC-DOS/MS-DOS
SOFTWARE: ASCII-DOS
CURRENT APPLICATION DATA:
APPLICATION NUMBER: US/08/476,537
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      MOLECULE TYPE: Oligonucleotide
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      1-312-744-0090
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                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             TELEFAX: 1-312-755-448: INFORMATION FOR SEQ ID NO: SEQUENCE CHARACTERISTICS:
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     TYPE: Nucleic acid
STRANDEDNESS: Single
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COMPUTER READABLE FORM:
                                                                   1342 AACATTGGTTT 1352
                                                                                                        2562 ACCATTGGGTT 2572
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CITY: Chicago
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CGCTCTTTTGCTTCTGAAGCTGTCCGCATTGGTACTGAAGGCTCACCAGTCAAGGCGTAC
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